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NEWS SUMMARY

GENERAL

Troops in Cuba 'SALT threat'

Senior Democrats in the U.S. Senate have suggested that the Strategic Arms Limitation Treaty with the Soviet Union would not be passed unless the Soviet combat brigate stationed in Cuba was withdrawn.

Senator Robert Byrd, the majority leader, and Senator Frank Church, chairman of the foreign relations commitee, agreed with President Carter's remarks that the SALT agreement should stand or fall "on its own merits."

But both agreed that the controversy surrounding the Russian troop presence in Cuba made Senate ratification unlikely. **Back page**

Fears for Pope

Police are considering the possibility of an attack on the Pope by Ulster Loyalist extremists during his visit to the Irish Republic later this month. The Ulster Defence Association ridiculed reports that it has sent a death squad, but did not rule out action by "some hardliner faction."

West Bank row

A major row broke out in the Israeli Cabinet over a recent decision to build four Jewish settlements in the occupied West Bank. **Page 3.** Palestinian demands for self-determination have been supported by Nahum Goldman, former president of the World Zionist Organisation.

Kurdish massacre

Unknown attackers massacred 46 Kurdish villagers at Garneh, near where 15 Islamic revolutionary guards were killed by Kurdish rebels.

Summit ends

Cuban President Fidel Castro wound up the Havana summit of the non-aligned nations after an all-night session which passed a resolution condemning Egypt's peace treaty with Israel. The future of Egypt's membership will be studied by a committee. **Page 3**

TV licence fees

AN index-linked television licence fee is likely to be introduced this autumn following negotiations between the Government and the BBC. The fee is due to rise in November—probably to £35 for colour. **Back page**

Sihanouk move

Former Prime Minister Edward Heath said in Peking that Premier Hua Kuo-Feng had indicated that Cambodia's ex-chief of State Prince Norodom Sihanouk may no longer be China's choice as a compromise leader for the nation.

In remembrance

One thousand flower petals were scattered on to the Thames in London from Westminster Bridge in remembrance of the Vietnamese boat people who died in the South China Sea. **Men and Matters, Page 24**

Scheckter wins

Jody Scheckter of South Africa, in a Ferrari, won the Italian Grand Prix at Monza, making certain of winning this year's world drivers' championship. Canada's Gilles Villeneuve, also in a Ferrari, was second, and Clay Regazzoni of Switzerland, in a Saudia-Williams, third.

Briefly . . .

Somerset have won two major cricket titles in two days. They beat Northants in the Gillette Cup Final and then defeated Notts to win the league title. **Cricket, Page 23**

BUSINESS

Oil price rise 'did not cause inflation'

● **OIL PRICE** increases are not the cause of the recent wave of inflation and unemployment in the West, according to a report issued by the General Agreement on Tariffs and Trade (GATT).

The report instead puts the blame on the outdated economic policies of Western Governments. **Back Page**

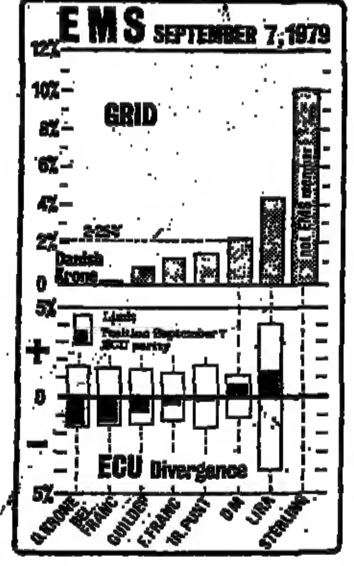
● **ENGINEERING INDUSTRY** faces another week of grave production losses when a second two-day national strike starts today. **Back Page**

● **A CAMPAIGN** to persuade the U.S. to stop individual States applying unitary taxation to foreign companies is being mounted by the Government and businessmen.

● **SIR MICHAEL EDWARDES,** chairman of BL, is expected to warn union leaders today that the price of additional State finance could be large-scale redundancies. **Page 7**

● **EUROPEAN** Commission proposals for the appointment of worker directors to company boards have been rejected by the European Parliament's legal affairs committee. **Page 11**

● **THE STRENGTH** of the D-Mark tended to disrupt foreign exchange trading last week. The Swiss National Bank sold dollars to prevent its currency weakening against the D-Mark, while weaker members of the EMS



suffered from even worse problems as a result of the appreciating mark. The Danish krone fell to its lowest permitted level against the mark, leading to intervention by the two central banks. Speculation continued about a possible realignment of EMS currencies. On Friday, the Austrian schilling—which is closely tied to the D-Mark but not in the EMS—was revalued by 1.5 per cent.

● **BRITISH AEROSPACE** has sold seven of its series 700-125 executive jets worth about £15m in the U.S. during last week. **Page 4**

● **COSSOR ELECTRONICS** has won a £16m contract to supply 42 Precision Approach Radar systems for airfields in the UK and overseas. **Page 3**

● **CENTRAL ELECTRICITY** Generating Board has emerged as the most likely UK candidate to seek a 50 per cent equity share in the Ranger uranium project, under development in Australia's Northern Territory.

● **BANK OF CANADA** has raised minimum interest to 12¼ per cent from 11¾ per cent.

● **THYSSEN,** West Germany's largest steel group, reports external sales up 8 per cent to DM 18.4bn ($10.2bn) in the first three quarters of this year compared with a year ago. **Page 27**

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Building societies may borrow from institutions

BY MICHAEL CASSELL

The building societies are considering borrowing from pension funds and insurance companies, as well as issuing loan stock to the public, to supplement their traditional sources of housing finance.

The development reflects growing concern about the societies' ability to continue to meet future home loans demand with money raised in the retail savings market.

Government plans for a major council house sales programme, in which it expects the societies to play an important funding role, have heightened fears that the movement will become progressively less able to satisfy the mortgage market and that it will have to find some funds elsewhere.

The Building Societies Association has given itself about three months to examine the size of the problem and the options for finding additional funds. If it decides to recommend such a fundamental development in borrowing policies, the Association will press for the limited legislative changes which will be necessary.

At this stage, the societies do not envisage the wholesale money markets providing a major portion of their new funds but many are gradually becoming convinced that fresh sources of finance will become essential.

Last year, gross receipts from investors reached £15.8bn against £6bn five years before and some projections suggest they will soon need about £20bn a year to meet the bulk of mortgage demand.

The societies are considering two areas in terms of raising wholesale money. They may decide to borrow long-term money on non-transferable terms from the institutions—either at fixed rates over agreed periods or at variable rates—or they might issue marketable loans which could be quoted.

This last option could necessitate changes in existing income tax arrangements, which permit societies to deduct tax due at source, because marketable stock could move from individual to corporate ownership and some holders might want gross payment.

Liquid funds

The societies will also examine the potential for short-term borrowing from the money markets to cover any marginal outflow of funds induced by interest rate changes.

Until now, the societies have had to use liquid funds as a limited means of stabilisation. Some now say that, if arrangements were established for a short-term tap, they could embark more confidently on a planned lending programme and also reduce the volume of funds now necessarily tied up in liquid form.

The cost of any move into the wholesale money markets and the implications for mortgage rates, is one of the most important factors being considered by a five-man committee, set up by the Association.

Wholesale money will be more expensive to raise than retail savings, but the societies point out that the cost of attracting money from their traditional sources, via an extension of services and branch networks, has been rising steadily.

A growing proportion of building society investment funds is also now turning over very rapidly, pushing up servicing costs. As a result, the societies claim, the gap between costs for retail and wholesale money is smaller than it seems.

It seems likely, however, that any move by the societies to raise a significant proportion of their funds from wholesale markets would result in more expensive borrowing rates — even if the increase was marginal.

The societies believe that the attractions of a less volatile but higher volume of total mortgage funds should offset any resulting upward adjustment in basic mortgage costs. They emphasise that wholesale money would remain only one option open to them and that they would continue to look to traditional investors and to the growth of term-shares to provide them with the greatest proportion of their income.

D-Mark exchange rates create dilemma in Basle

BY DAVID MARSH IN BASLE

PERSISTENT speculation on foreign exchange markets that the D-Mark will be revalued shortly within the European Monetary System has created a dilemma for leading central bankers gathering in Basle today.

Their two-day session at the Bank for International Settlements is the first since the summer break. A discussion of the first six months of EMS operation will be a key item on the agenda.

EEC central bankers will start a review of the system's technical workings to be sent to finance ministers before the November Common Market summit in Dublin.

With the system working relatively smoothly since its March inception, several European central banks argue that governments should not be rushed into a hasty re-alignment of exchange rates, despite last week's renewed weakness of the Belgian franc and Danish krone against the D-Mark.

But the West German Bundesbank will probably reaffirm its view that exchange rates should be adjusted as soon as existing parities become unrealistic.

Some German economic commentators have recently been calling for a small D-Mark revaluation to help moderate imported inflation.

The Danish krone is generally agreed among European central banks to be fundamentally the weakest currency in the EMS.

With Denmark particularly badly hit by the oil-price rise, political pressures have been growing in Copenhagen for a devaluation—and are likely to be reinforced by last week's report from the Organisation of Economic Co-operation and Development recommending such a step.

But elsewhere in the EMS the position is less clear-cut. Belgium and the Netherlands are strongly opposed to devaluation on the grounds that this would boost inflation. Both the Italian lire and—to a lesser extent—the French franc have been reasonably firm lately against the German currency.

Because of other countries' increased reluctance to devalue, Dr. Otmar Emminger, Bundesbank president, has already stated that Germany may have to carry out D-Mark revaluations more frequently within the EMS than it did within the scheme's forerunner, the European "snake."

Last week's strains within the EMS were accompanied by a revival of dollar weakness. On Friday, the U.S. currency slipped down close to DM 1.80—which has acted as its unofficial floor this year—and had to be supported heavily by the U.S. and German central banks.

The renewed fragility of the dollar may prompt Mr. Paul Volcker, new chairman of the U.S. Federal Reserve Board, who is making his first Basle appearance in this capacity—to ask for an assurance from his German counterparts that the Bundesbank will not over-tighten credit.

One of the principal reasons for last week's D-Mark firmness was a further rise in short-term German interest rates.

U.S. banks' prime rates last week were forced up to record levels—and Mr. Henry Reuss, chairman of the House banking committee, has sharply criticised the Bundesbank's monetary policy on the grounds that it is adding to recessionary pressures in the U.S.

The BIS meeting is the first in a series of international monetary gatherings taking place next week.

The central bank governors and finance ministers from the so-called "Group of Five" will meet in Paris next weekend as a prelude to the annual meeting of the International Monetary Fund in Belgrade. Next Monday EEC finance ministers gather in Brussels for their first session since the summer pause.

Iraq warns oil companies that it may end their contracts

BY RAY DAFTER, ENERGY EDITOR

IRAQ, the third biggest Middle East oil exporter, has injected fresh uncertainty into the world's oil supply and demand balance by reportedly telling a number of major companies that their contracts will be terminated at the end of the year.

It has told some major customers, including Shell and British Petroleum, that present contracts have become "inappropriate" owing to changing circumstances, according to Middle East Economic Survey.

Iraq accounts for almost 11 per cent of the output of the Organisation of Petroleum Exporting Countries.

Companies said to have been served contract termination notices are Shell, with 225,000 barrels a day at present, BP (80,000), Gulf Oil (60,000), Mobil (50,000) and Exxon (30,000). It is thought that Amoco, which lifts about 120,000 barrels a day from Iraq, may also be affected.

Government to government deals have so far not been affected, according to the report. These cover supplies to French, Italian, Brazilian, Spanish, oPrtuguese and Greek companies.

The move does not necessarily mean that those served wtih termination notices will lose their supplies. They are likely to be asked to sign new deals, which would almost certainly include a significantly higher price for Iraqi crude, irrespective of the pricing decision taken by the OPEC oil Ministers at their scheduled meeting in Caracas, Venezuela, in December.

Iraqi now sells its Basrah Light crude oil for around $19.93 as opposed to $12.60 a year ago. Its output in the second quarter of this year was estimated at 3.36m b/d, the third highest OPEC production after Saudi Arabia and Iran.

The Shell group last year lifted about 4.5 per cent of its total supplies from Iraq, its sixth biggest supplier.

For BP the move could be another blow coming on top of the cutback in supplies from traditional exporters like Iran and Nigeria. The 80,000 b/d of Iraqi crude is about 4 per cent of BP's 1978 refinery throughput.

In previous years even if these supplies had been terminated BP would have had more than enough crude oil to satisfy its needs. But in recent months it has found its large crude oil surplus being eroded. It now has just about enough to satisfy its refinery needs. Sir David Steel, BP chairman, has already warned that the company could find itself short of crude next year.

According to Middle East Economic Survey Iraq's objectives have not yet been fully spelled out. The country has been insisting, however, that companies buying its crude must comply with the Arab boycott and undertake not to send it to Egypt, Israel, South Africa or Rhodesia.

RHODESIA CONFERENCE PESSIMISM

Delegations separated by huge gulf

BY MARTIN DICKSON AND MICHAEL HOLMAN

LORD CARRINGTON, the Foreign Secretary, today opens the Lancaster House conference on Rhodesia amid general pessimism about its chances of achieving a comprehensive settlement agreement.

Weekend statements by the two Rhodesian delegations—the Salisbury Government of Bishop Abel Muzorewa and its Patriotic Front guerrilla opponents—underlined the huge gulf that has to be bridged by Lord Carrington, the conference chairman.

Mr. Joshua Nkomo, co-leader of the Patriotic Front, yesterday condemned last week's three-day Zimbabwe Rhodesian raid into Mozambique as a "monstrous act of banditry." He claimed Bishop Muzorewa had no power and that the machinery of Government in Salisbury remained "in the hands of Ian Smith and his white clique."

The Bishop, describing the Patriotic Front leaders as "cowardly terrorists," said Zimbabweans were "determined to reject any wanton robbery of their powers by some wanton dictator in the making."

Mr. Ian Smith, the former Rhodesian Prime Minister, carefully avoided any political comment when he arrived in London yesterday on his first visit to Britain since he unilaterally declared Rhodesia independent in November 1965. Mr. Smith, like other members of the Bishop's 20-man delegation, has been granted immunity from arrest during the conference.

The conference will open this afternoon with a welcoming speech by Lord Carrington. The Rhodesian delegations will state their opening positions on Tuesday. These are likely to be far apart and Lord Carrington's first job will be to find areas of common ground.

The British Government, adopting a step-by-step approach to the negotiations, wants the conference first to debate a new constitution for Zimbabwe to replace that agreed to by Bishop Muzorewa and Mr. Smith in March 1978. The aim is to reduce the powers for whites entrenched in that agreement and give Zimbabwe a constitution akin to that granted other ex-British colonies in Africa.

Although there are signs that the Salisbury delegation will be prepared to yield some ground, it is far from certain that it will agree to all the British demands.

If agreement can be reached on a constitution, the conference would then move on to the extremely controversial problem of who should run Zimbabwe during the transition to independence

Mr. Nkomo demanded this weekend that any pre-independence elections be supervised by Patriotic Front representatives as well as Britain, together with others outside the conflict. Any such demands are certain to be rejected by Salisbury.

Short of outright success or failure, observers see two possible outcomes for the conference. One is an agreement on a constitution and transitional arrangements between Salisbury and Britain which the Patriotic Front rejects.

The other is an agreement which is accepted by both Salisbury and Mr. Nkomo's wing of the Patriotic Front, but not that led by Mr. Robert Mugabe. However, there are no signs of any divergence of views between the two men, who issued a joint pre-conference statement recently.

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Editorial comment, Page 24

Such hopes as there are for a comprehensive settlement stem largely from the impetus given to the conference by last month's Commonwealth summit at which Presidents Kaunda of Zambia and Nyerere of Tanzania threw their weight behind the initiative.

Observers from both countries, as well as Mozambique, will be in London for the talks. President Nyerere arrived in Ireland yesterday on a State visit and will pass back through London at the end of the week.

● A MILITARY communique released in Salisbury said Zimbabwe Rhodesia forces had killed more than 300 Mozambican and Zimbabwe African National Liberation Army guerrilla fighters last week in one of their most extensive raids into neighbouring Mozambique. About a dozen joint bases and command posts had been destroyed or damaged and five bridges knocked out. In the attacking force, 15 white soldiers and airmen were killed.

● THE CARTER Administration has given the Salisbury Government permission to send "one or two" representatives to Washington on an unofficial basis, the State Department announced. But it stressed these representatives would have no diplomatic or official status.

Thatcher plays for high stakes

By Richard Evans, Lobby Editor

MRS. MARGARET THATCHER is playing for exceptionally high stakes at this week's Rhodesia constitutional conference, both within the Conservative Party and in terms of international diplomacy and trade relations throughout Africa.

The future of Zimbabwe-Rhodesia has been a deeply emotional issue for the Tories ever since UDI was declared. A damaging split seems certain if the Muzorewa Government is forced to concede too much, or if there is no progress at all.

As the talks open, the majority of Conservative MPs are prepared to back Mrs. Thatcher's bold initiative in calling the conference. The party critics are confined to the Monday Club and to a small number of right-wingers led by Mr. Julian Amery, who suspected a sell-out at Lusaka. They will fight any settlement giving power and influence to the Patriotic Front.

The depth of feeling and close links with white settlers will mean that the party's right will strongly resist any formula unacceptable to the present Rhodesia leadership. But if a settlement is reached that is backed by Bishop Muzorewa, there is little doubt that Mrs Thatcher and Lord Carrington could sell it to the Tory Party as a whole.

Ministers have been surprised and relieved at the lack of party outcry after Mrs. Thatcher's Lusaka initiative. There were warning noises from the right-wing while the Commonwealth leaders were meeting, but there has been surprisingly little protest since.

The difficulties for the leadership will come at the party conference in Blackpool in mid-October, when a debate on Rhodesia will be held. Its form will depend on the outcome of the constitutional talks. But it will back recognition of a multi-racial government in Salisbury and will certainly provide a platform for the vociferous right.

A more significant hurdle for the Government would be the renewal of sanctions in November. This may be considered necessary if constitutional talks are continuing. Mrs. Thatcher's aim has ben to avoid a confrontation with her party by reaching a satisfactory settlement before then. Sanctions would simply be allowed to lapse.

She has declared that a

(Continued on Back Page)

ZIMBABWE: THE LAST CHANCE?

A choice between compromise and devastation

WITHIN THE honey-coloured walls of Lancaster House—scene of negotiations on the Rhodesia "problem" stretching back nearly 30 years—two dozen men will sit down at a conference table this afternoon in what is probably the last chance for an internationally negotiated settlement for Zimbabwe.

Over the years, analysts have given Rhodesia as many "last chances" as a cat has lives. This time they could be right. If the warring parties cannot find common ground, there seems little alternative to an escalation of the guerrilla war, which has already claimed over 20,000 lives, to the point of defeat for one side or the other.

Such a battle would have grave consequences for the whole of Southern Africa. Zimbabwe and its efficiently run economy could be devastated.

The Russians and Cubans could intervene in strength on the side of the Patriotic Front guerrilla movement, while South Africa might step in militarily to support Salisbury.

It was against this sombre backdrop that Commonwealth leaders met in Lusaka last month. They decided that one last effort must be made to find a solution and that Britain should call the constitutional conference which opens in London today.

But even with the full backing of the Commonwealth, there seems only a slim chance that a comprehensive solution, acceptable to all, will emerge from the meeting.

The long drawn-out and bloody Rhodesia conflict is an immensely complicated and volatile mix of East-West strategic interests, white power-broking and black nationalist rivalries stemming from tribal, personality and ideological factors.

- A 250,000 strong white minority which, after almost 90 years of racial domination, gave way in June to a black-led Government under Bishop Abel Muzorewa, though the whites still retain immense power and influence in Rhodesia. Neighbourig South Africa, which controls Rhodesia's economic lifelines, can also exert great pressure on the Salisbury Government.
- A divided black nationalist movement. Some elements of it—notably Bishop Muzorewa's UANC and Rev Sithole's wing of ZANU—have come to a constitutional agreement with the whites which provides for a watered down form of majority rule. But the two nationalist movements which make up the Patriotic Front guerrilla organisation—Joshua Nkomo's ZAPU and Robert Mugabe's ZANU—are fighting on. They reject the present constitution and—as the men with the guns who have forced the whites to yield—they are demanding a predominant role in any transition to independence.

A special report by Martin Dickson in London, Tony Hawkins and Quentin Peel in Salisbury and Michael Holman in Lusaka.

The Patriotic Front itself is far from being a united movement. Repeated attempts to unite Mr. Nkomo's predominantly Ndebele army with Mr. Mugabe's predominantely Shona one have ended in failure.

- Big power rivalry. Both wings of the Patriotic Front now receive support from Moscow which would like to see Soviet-orientated regimes established across this area of Africa, with its immense mineral wealth. The West wants to keep the area in its camp, but cannot do so at the price of supporting white racialism.

On top of all these factors are personal antipathies which the protagonists at Lancaster House will find it difficult to hide:

Mr. Nkomo and Bishop Muzorewa loathe each other. Neither Mr. Nkomo nor Mr. Mugabe has much trust in his Patriotic Front partner. Mr. Mugabe has a deep personal hatred for Mr. Smith, who in turn has never disguised his contempt for Mr. Mugabe. Whites generally have never forgiven Mr. Nkomo for the shooting down of two Air Rhodesia Viscount aircraft. And not one of the above trusts the Machiavellian Rev. Sithole.

In his internal settlement agreement, Mr. Smith conceded the general principle of black majority rule—something he had once said would never happen in his lifetime. But this left unresolved two central problems which have dogged successive settlement attempts: the amount of power and influence the whites should retain, and which nationalist leader should inherit Zimbabwe.

The Lancaster House conference will attempt to find an answer to at least the first of these problems. The British aim is to reach agreement on a constitution which dilutes present white powers, but still guarantees the minority a place.

If that can be achieved, the conference will then move on to discuss the extremely sensitive question of who will run Zimbabwe in the run-up to fresh elections, and what will be the composition of the armed forces.

This issue is particularly delicate, because the transitional arrangements could give a pronounced advantage to one or other faction. Each side wants to be in a position of dominance.

The war is the key to Zimbabwe — a war which, as articles on this page indicate, is far from settled. White morale, vital for Salisbury's war effort, is still holding up, while the Zimbabwe economy is showing signs of a modest recovery. On the battlefield itself, casualties on all sides are constantly rising, but neither side is yet near a conventional military victory.

The result is that each side still believes it will ultimately emerge victorious, and neither will therefore be approaching Lancaster House in a mood for compromise.

On the contrary, both Salisbury and the Patriotic Front are likely to see the conference largely as a means of gathering, or consolidating, international support.

Both sides will be concerned not merely with whether the conference fails, but with the manner in which it might collapse, since this could determine international opinion.

This is, perhaps, too cynical a view of the Lancaster House meeting, since there are some faint rays of hope. The most important is the fact that two of the key front-line leaders—President Julius Nyerere of Tanzania and President Kenneth Kaunda of Zambia—have thrown their full weight behind the conference.

For the Lancaster House conference to succeed, there will have to be a remarkable display of compromise by all parties to the Zimbabwe dispute. But if history is any guide, there is little hope of that. In the nearly 30 years since the Central African Federation was forged out of another conference at Lancaster House, Rhodesian politics—both black and white—have been characterised more by divisiveness than by statesmanship.

20,000 dead in a war neither side can hope to win

THE ZIMBABWE High Command believes that the seven-year-old guerrilla war has reached military stalemate, a situation in which neither side can hope to win a strictly "military" victory. It is arguable that this assessment is shared by at least some of the top men in the Patriotic Front and that their attendance at the London talks reflects the belief held by both sides that victory on the battlefield is at best a long way away and at worst far from certain.

Clearly, this is not the same as saying that neither side can win the war. Indeed in Salisbury, from where the prospects for the London Conference look bleak, the widely held assumption is that the dispute will be finally resolved only when one side or the other concedes that it has lost the war.

Unwinnable

General Peter Walls, Commander of Combined Operations in Salisbury, has long argued that first Rhodesia, and now Zimbabwe, has been fighting a war that is unwinnable militarily. There has to be a political solution, sooner or later. The general believes that Zimbabwe is now on top in the struggle. "Strategically, we have turned the corner," he says.

In his view, the signing of the internal settlement in March last year, the elimination of all "legalised" racial discrimination in Zimbabwe, and the one-man-one vote elections in April, which lead to Bishop Muzorewa's majority-rule Coalition Government on June 1, marked the turning of the tide.

There are several other explanations for the belief by military that the worst is past. Firstly, the economy appears to have turned the corner, too. It is far healthier today than 18 months ago. This makes it easier to finance the war. Secondly, with the advent of black government it has become easier to borrow abroad to finance the war, and certain strategic supplies are more readily available now than they were only a few months ago. Thirdly, there is evidence that the "boys in the bush" (the guerrillas) are less popular today than they were not so long ago.

Above all, the host economies of Zambia, Tanzania and Mozambique, but especially Zambia, are less able to sustain the war effort than ever. These considerations, taken together, encourage military planners in Salisbury in the view that they are on the up and up.

The war is imposing an enormous cost on the economies of all the states involved—Zimbabwe, Zambia, Botswana, Mozambique, South Africa and, to lesser extent, Angola and Tanzania. War spending absorbs 37 per cent of the Zimbabwe budget, or 1.1m Zimbabwe dollars a day (£725,000 daily).

The cost of the war in human terms is appalling. Official figures show that more than 20,000 people have died since the war started. By the end of last month, the figures showed that the guerrillas had lost more than 9,200 men inside Zimbabwe and an estimated 2,500 to 3,000 in transborder raids by the Zimbabwe security forces against bases in Zambia, Angola, Botswana and Mozambique. In addition, a further 1,800 "terrorist collaborators, recruits and cattle rustlers" have been killed by the forces, taking total guerrilla losses to at least 13,500.

Over the same period, the Security Forces have lost 1,050 men in action, while 3,000 black and 435 white civilians have been killed by the guerrillas.

Although the guerrilla losses have been heavy this year—more than 3,000 dead inside Zimbabwe alone—and the security forces have killed 11 guerrillas for every military casualty, the Patriotic Front has an enormous manpower reservoir in training, mainly in Zambia and Angola (Mr. Nkomo's Zipra) and in Mozambique and Tanzania (Mr. Mugabe's Zanla).

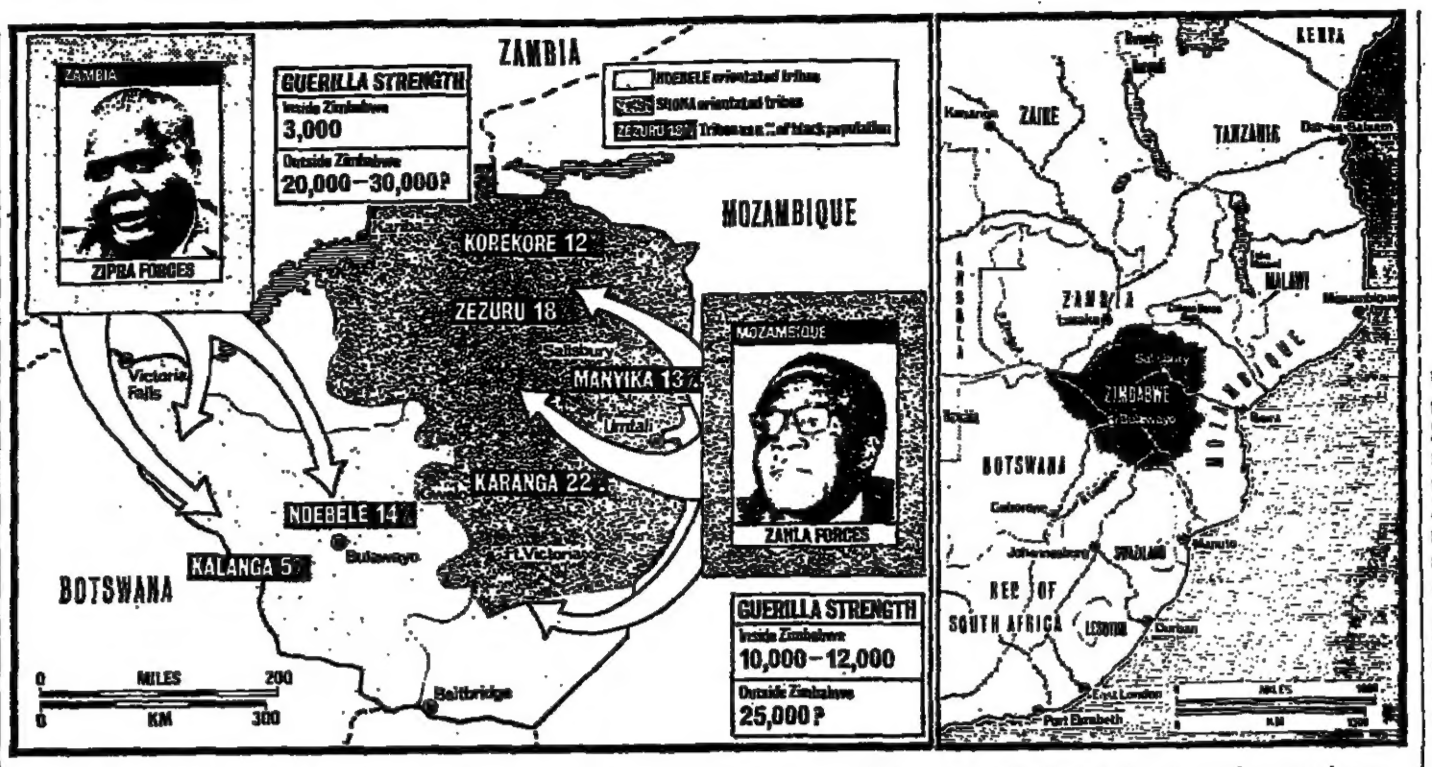
Guerrillas

Zimbabwean estimates put Mr. Nkomo's current strength at about 3,000 guerrillas inside Zimbabwe and 20,000 to 30,000 outside. In Mr. Mugabe's Zanla the estimates are 10,000 to 12,000 inside Zimbabwe and at least 25,000 outside.

The number of guerrillas inside the country has escalated from less than 70 at the end of 1974 to 8,000 late last year and between 12,000 and 14,000 today. The guarrillas are opposed by the small, highly efficient regular Zimbabwe Army of about 12,000 men, which is backed by some 45,000 army and police reservists, though only a small number of these is in the field at any time, as well as by the regular police force (mainly black) and the extremely effective air force, which has struck devastating blows against the guerrilla bases as far afield as Angola.

It is impossible to gauge how the war is going. Military commanders deny that there is a substantial escalation.

Salisbury strategists argue that there is a stalemate—providing there is no new input such as the Cubans or the East Germans.



BLACK NATIONALISM in Zimbabwe has long been noted for its divisions rather than its unity and these cleavages will be an important factor at the Lancaster House conference.

At root, few of these divisions appear to be concerned with ideology. Personality clashes play a major role and tribal rivalries are also a significant element even though nationalist leaders frequently accuse the Press of exaggerating the importance of the tribal factor.

There are two major tribal groupings in Zimbabwe: the Shona-orientated tribes which account for roughly 75 per cent of the population, and the Ndebele grouping which accounts for 19 per cent. The balance is made up of minor tribes—the Venda, Shangaans and Tonga.

The Ndebele and the related Kalanga tribe live in the west and south-west of the country, while the Shona live in the centre and east (see map).

Joshua Nkomo, leader of the Zimbabwe African People's Union (ZAPU) wing of the Patriotic Front, is acknowledged as the leader of the Ndebele-orientated grouping. However, another politician of the Ndebele group, Chief Ndiweni, leader of the United National Federal Party (UNFP) and a member of the Salisbury Government, plays the role of a "surrogate" spokesman for Mr. Nkomo.

The Shona are divided into six sub-groupings. These include the Karanga, Zimbabwe's largest tribe, among whom Robert Mugabe, leader of the Mozambique-based Zimbabwe African National Union (ZANU), commands a large following. The Karanga comprise 22 per cent of the population and live mainly around Fort Victoria in the south-east; the Zezuru, the second biggest single group, who make up 18 per cent of the population and live in the Salisbury area; and the Manyika, who make up 13 per cent of the population and live in the Umtali area.

Bishop Muzorewa is a Manyika and his critics have long accused him of surrounding himself with a Manyika "tribal clique."

However, the weakness of seeing Zimbabwean politics simply in tribal terms is well illustrated by the Zezurus, who support a wide range of parties. Members of this tribe include George Nyandoro, a veteran nationalist and member of Bishop Muzorewa's party; James Chikerema, leader of the (basically Zezuru) Zimbabwe Democratic Party, a breakaway from the Bishop's UANC; Chief Chirau of the Zimbabwe United People's Organisation (ZUPO); and several leading members of Mr. Nkomo's party, including deputy leader Josiah Chinamano.

'I often wonder why we fight . . .'

AN OCCASIONAL, strange, mine-protected vehicle (heavy roll bars and wheels on stalks) and a handful of soldiers in camouflage fatigue dress are the only tangible signs of the war one sees in Salisbury, the capital.

The war seems remote and the capital remains slow-moving, incorrigibly provincial, with more than its share of blue-rinsed matrons decorating hotel dining rooms.

Only the occasional groups of unemployed young blacks are a reminder of more fundamental problems than the absence of butter or whisky from the shops.

All this would seem to be about to end. Last week martial law was extended over more wide areas of the country, bringing its boundaries to within ten miles of the city centre.

Black townships have been inundated with some 250,000 refugees from the tribal trust lands, and squalid squatter camps have become a permanent feature of their fringes.

A letter to a Salisbury newspaper last week was signed "Canute" by its white author, a self-identification symptomatic of the gorwing mood of resignation among the embattled minority.

The advent of black political rule in Salisbury was widely regarded among whites as being an adequate concession to black aspirations for majority rule. The fact that daily life has not altered noticeably since the change has been a bonus.

Change is apparent in high places. A new flag flies from Government buildings. A few more black customers frequent city restaurants. Wealthier blacks have moved into many white suburbs.

On balance, whites have been pleased with the rule of Bishop Abel Muzorewa.

But two factors have damaged white morale most: the inability of the Bishop to have any effect on the war, which has appreciably escalated since he came to power, and the announcement of a new consitiutional conference.

The first dominates all other thinking. "The people want peace: that is what the people want," an announcer intones on the radio. Despite its incongruity, the message is clear.

The call-up hits hardest at white school-leavers, many of whom cannot take up training for careers because of military service every six months.

Young whites are bitter, too, that their black contemporaries are obviously avoiding the draft. Of the first 3,000 blacks called up, only 700 reported. "They just throw their call-up papers in the wastepaper basket," an MP said.

The calling of the constitutional conference was a further blow to white morale because it amounted to a recognition of failure on the part of the Salisbury Government.

The problem for the Bishop is to maintain white morale and yet answer soaring black expectations. So far he has failed most dismally on the successful on the former.

But if morale has been dented, there is still no sign of the predicted mass exodus of whites. But the tone and noise of the questioning is rising. "I often wonder" one letterwriter asks in a Salisbury paper, "why we fight—to keep in power those who value us least?"

Crucial factor of world prices

WHATEVER THE outcome of the Constitutional Conference, Zimbabwean businessmen expect rapid erosion, if not formal abolition, of economic sanctions. Indeed, ever since the internal settlement agreement was signed 18 months ago, sanctions erosion has been evident and the pace of this has accelerated still further following the installation of Bishop Muzorewa's majority Administration on June 1.

More important probably than the actual erosion of sanctions last year was the upswing in world commodity prices and demand which resulted in a significant improvement in Zimbabwe's exports last year, despite the war. Exports rose 13 per cent paving the way for a substantial increase in import quotas in the first half of 1979.

The Rhodesian economy reached a peak in 1974 with a per capita income of 223 Zimbabwe dollars (at constant 1965 prices) since when real income per head has fallen an estimated 23 per cent. The steepest decline occurred in 1977 when real GDP fell almost 7 per cent, but last year the fall in real output slackened to 3½ per cent and in 1979 it is likely to be about 2 per cent.

Indeed, at current prices GDP this year should rise by at least 10 per cent — double last year's rate — but the sharply higher inflation rate, largely attributable to soaring oil prices, means that there will be no real growth again this year, for the fifth successive year.

The war imposes a considerable burden on the economy in the form of the loss of skilled manpower (through emigration as a direct result of the military call-up); the actual financial cost of the war itself, which has prevented Government from investing in much needed rural development and job creation programmes; the destruction of capital equipment, especially in agriculture, and the forcing from the land of some of the country's better farmers.

For these reasons, Salisbury businessmen argue that the lifting of economic sanctions of itself would not have much impact on the economy. If the economy is to recover strongly and regain the growth momentum that it managed to achieve, even under sanctions, between 1969 and 1974, then there must be an end, not so much to sanctions, but to the war.

Seeds of conflict in 1890s

THE SEEDS of the Rhodesia tragedy were sown in the 19th century, a period marked by two major invasions—one black and one white.

In the 1830s, the warrior chief Mzilikazi established the great Matabele kingdom which held sway in what was to become Rhodesia until the arrival of the European colonisers. These came in strength in 1890 when the "pioneer column" recruited by the imperialist Cecil Rhodes marched into the country. From then until 1923, Rhodesia was under the jurisdiction of Rhodes' British South Africa Company.

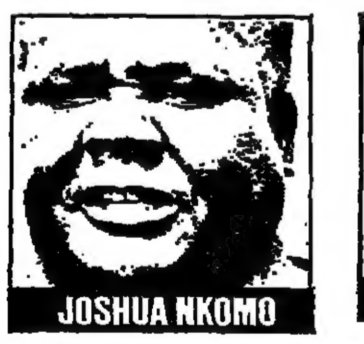
In 1922 white Rhodesians were given the choice of responsible self-government as a British dependency or of joining the Union of South Africa. By 8,774 referendum votes to 5,989 they chose self-government.

Another major constitutional change came in 1953 when Southern Rhodesia entered the Central African Federation with Nyasaland and Northern Rhodesia. This finally collapsed in 1963 and Nyasaland and Northern Rhodesia proceeded to independence as Malawi and Zambia.

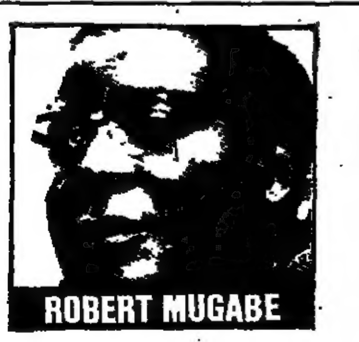
But Southern Rhodesia and Britain could not agree on the role for blacks in an independent constitution and on November 11, 1965, Ian Smith unilaterally declared Rhodesia independent.

Mr. Harold Wilson and Mr. Ian Smith held two rounds of abortive settlement discussions—aboard HMS Tiger in December 1966 and aboard HMS Fearless in October 1968. But it was not until November 1971 that a settlement really seemed in sight when Sir Alec Douglas-Home, then Conservative Foreign Secretary, and Mr. Smith signed an agreement. This, however, had to be acceptable to the people of Rhodesia as a whole, and in 1972 a Commission under Lord Pearce found that the majority of Africans rejected the plan.

In September 1977 Dr. David Owen, the then Foreign Secretary, unveiled a new set of settlement proposals but three months later Mr. Smith seized the political initiative by launching his own internal settlement talks


JOSHUA NKOMO

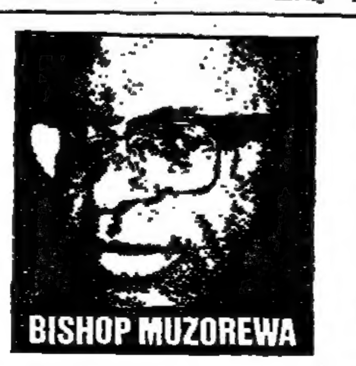
JOSHUA NKOMO, the burly, veteran leader of the Zimbabwe African Peoples Union (ZAPU) was first in London for a constitutional conference nearly 30 years ago to establish the Central Africa Federation. His nationalist activities led to his detention in 1964 and for a decade he was restricted to a detention centre. Three bilateral attemps by Nkomo to reach agreement with Ian Smith have failed and today he is commander-in-chief of the 25,000 strong Zimbabwe Peoples Army (ZIPA), the military wing of ZAPU, based in Zambia and Angola, and backed by the Soviet Union, East Germany and Cuba. His moods can change rapidly, furiously berating journalists one minute and then cracking a joke. Behind doctrinaire, sometimes ill-considered statements, is a flexible, shrewd and pragmatic man.


ROBERT MUGABE

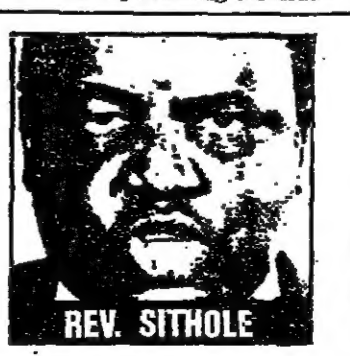
ROBERT MUGABE emerged in 1974 from 11 years in detention with a string of university degrees taken by correspondence and the victor of a prison dispute with Ndabaningi Sithole over the leadership of the Zimbabwe African National Union (ZANU). A slight man, assured and precise, Mugabe has since successfully fought off a challenge to his leadership which resulted in the detention of five central committee members of ZANU early in 1978. The ZANU military wing, the Zimbabwe African National Liberation Army (ZANLA), is backed mainly by China but is increasingly seeking the support of the Soviet Union and Cuba. Born in 1924 the son of a village carpenter, Mugabe is a committed Marxist. Unlike Joshua Nkomo, the co-leader of the Patriotic Front, he never negotiated directly with Ian Smith.


LORD CARRINGTON

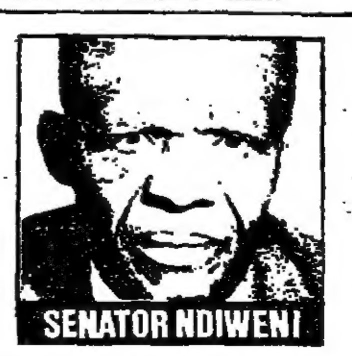
AS CONFERENCE chairman, he is the man who has the unenviable task of trying to find some common ground between Zimbabwe's deeply divided factions, and the man who will be most exposed to criticism if the conference ends in failure. Urbane, wordly-wise and with an immensely cheerful disposition, Britain's 60-year-old Foreign Secretary must take much of the credit for the successful outcome of August's Commonwealth conference, which paved the way for the Lancaster House meeting. One of Mrs. Thatcher's closest advisers, his experience of government goes back to the Churchill era. Minister of Defence from 1971 to 1974 and briefly Energy Minister at the time of the "three day week," he became Foreign Secretary after the May election.


BISHOP MUZOREWA

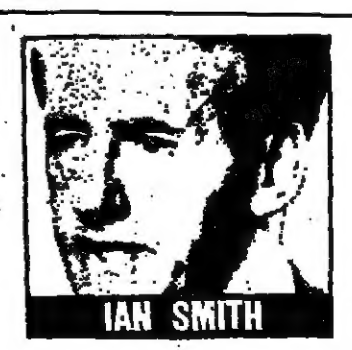
A DIMINUTIVE, bespectacled Methodist clergyman, the 54-year-old Bishop became first black Prime Minister of Zimbabwe on June 1 after a comfortable victory in April's internal settlement elections. From the Manyika sub-group of the Shona tribe, he came to prominence when other nationalist leaders were in detention, leading the African National Council which sprang up in 1971 to oppose the Anglo-American settlement plan of that year. When Nkomo, Sithole and Mugabe were released in 1974, it seemed that the Bishop's stars might wane. But even though he ha dfew guerrilla followers, the Bishop retained wide popular support inside Rhodesia. This enabled him to bring much-needed credibility to the March, 1978, internal settlement agreement.


REV. SITHOLE

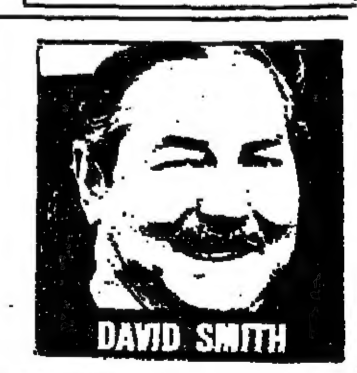
SHORT AND plump, with a penetrating stare, 59-year-old Sithole is one of Zimbabwe's veternan nationalists, and a powerful orator. A member of the small Ndau sub-group of the Shona tribe, he broke away from Nkomo's ZAPU movement in 1963 to set up the rival ZANU nationalist organisation. He was widely regarded as the man most likely to adopt a bitterly intransigent attitude towards the white Government. But after losing his leadership of ZANU to Mugabe, he returned to Salisbury in 1977, renouncing "terrorism," and took part in the 1978 internal settlement agreement. After his party lost heavily at the polls to Bishop Muzorewa, Sithole changed tack completely, denounced the election as rigged, and refused to join the Government.


SENATOR NDIWENI

MINISTER OF Mines and Works in the Salisbury Government. A 63-year-old Matabeleland chief, he owes his presence at the conference table to the surprising success of his newly-formed United National Federal Party in April's internal settlement elections. It won nine of the black seats, atracting the bulk of the Matabele vote in Mr. Nkomo's absence. Long an advocate of a "federal" solution for Zimbabwe because of his innate Ndebele fear of Shona domination. He is unhappy about the internal settlement constitution because it does not guarantee the position of the Ndebele minority and will argue in London that regional devolution is vital. Senator Ndlweni was one of the founders in 1976 of Chief Chirau's conservative Zimbabwe United People's Organisation.


IAN SMITH

STILL unchallenged leader of Rhodesia's whites, the 60-year-old Smith stepped down as Prime Minister at the end of May after 15 years in the job. The son of an emigrant Scottish butcher, he was a distinguished fighter pilot with the RAF in World War Two (he was twice shot down) and entered the Southern Rhodesia parliament in 1948. In the early 1960s he broke away from the ruling United Federal Party to help to form the Rhodesian Front and was Finance Minister from December 1962 to April 1964, when he ousted Winston Field as Premier. For the next 15 years he bestrode Rhodesian politics like a collosus. Disliked and distrusted by successive British Governments, but revered by his white electorate, Smith is now Minister without Portfolio, playing little evident part in public life.


DAVID SMITH

MINISTER OF Finance and former Deputy Prime Minister, he is a complete constrast to his leader, Mr. Ian Smith. David Smith is an administrator, while Ian Smith an orator. Enormously popular he is no public speaker and lacks grass roots support. Because of the contrast he is widely regarded as Ian Smith's natural successor under majority black rule. Liked by his opponents he has no great following within the party. Earlier this year, just before the internal elections he announced his decision to quit politics. But protests came in from London, Washington and the black parties in the Salisbury Government. Born in Argyll, Scotland, in 1922, he came to Rhodesia in 1946.

هكذا انا الأول

OVERSEAS NEWS

Greek growth slowed by energy crisis

BY OUR FINANCIAL STAFF

A RISE of 4 per cent is expected in Greece's gross national product (GNP) this year, Mr. Constantine Karamanlis, the Prime Minister, announced at the week end.

The forecast compares with an increase of 5.9 per cent in GNP last year. He attributed the slowdown to the problems created by the energy crisis and the unfavourable effect of the weather on agriculture.

Depite this, however, the rate of increase this year would still be significantly higher than the expected European Economic Community average of 2.5 per cent.

Mr. Karamanlis said that fixed capital investments were expected to increase by 4.1 per cent, as against 3 per cent in the Common Market. This rate was not considered satisfactory because of the need for accelerated development of the Greek economy in view of the country's accession in the Common Market and because private investments were lower than public in the public sector.

The current account deficit was expected to be about $1,750m compared with $1,250m last year.

Mr. Karamanlis

The deficit would be covered by the import of capital, deposits in foreign exchange and by borrowing. Greece's most serious problem was inflation, this year expected to reach 20-21 per cent.

Mr. Karamanlis was speaking at the inauguration of the 44th International Trade Fair in Salonica.

Assad sends troops north to quell violence

BEIRUT—The Syrian Government of President Hafez Assad sought to reassert its authority over northern towns yesterday, sending troop reinforcements and guarding major highways, it was reported here.

Violence in northern Syria has been blamed on the extreme Sunni organisation, the Moslem Brotherhood.

A bomb exploded in the offices of Syrian Airlines in Damascus and another shook the marketplace in the capital but no casualties were reported.

Husni Mahmoud Abou, national vice-chairman of the Moslem Brotherhood, has admitted planning a wave of assassinations and bombings aimed at provoking a civil war in Syria. He made the confession in a television interview here at the weekend. Officials said Abou was arrested last month following the massacre of army cadets in the northern city of Aleppo on June 16.

Western diplomats in Beirut said at least 40 people had been killed in sectarian fighting in Latakia which followed the murder of Sheikh Youssef Sarim, a member of the minority Alawite sect.

Agencies

Israel rethinks settlements after Cabinet row

BY DAVID LENNON IN TEL AVIV

A MAJOR row broke out in the Israeli Cabinet yesterday over a recent decision to build four new Jewish settlements in the occupied West Bank.

One Minister accused another of deceiving the Cabinet over settlement plans and was in turn accused of trying to sabotage the Government plan for settlements in the occupied territories.

Professor Yigael Yadin, the Deputy Prime Minister, accused Mr. Ariel Sharon, the Minister in charge of settlements, of deceiving the Cabinet about the new settlements. He claimed that Mr. Sharon had led the Cabinet to believe that the plan was to expand existing settlemens rather than to build four new ones.

Professor Yadin and two ministerial colleagues refused to attend yesterday's Cabinet meeting until it was agreed to discuss a settlemen decision.

However, after a special Ministerial meeting, the Cabinet spokesman said that the Government had rejected Prof. Yadin's charges. At the same time it was agreed the Cabinet would reconsider the establishment of two of the four settlements approved earlier.

Mr. Sharon said that the Deputy Premier, who had been abroad when the original decision was taken, was trying to sabotage the settlement programme.

Ground-clearing work has already started on the West Bank for at least one of the new settlements.

Mr. Moshe Dayan, the Foreign Minister, again defended himself against criticism of his recent meetings with leading spokesmen for the Palestine Liberation Organisation in the occupied West Bank and Gaza Strip.

Speaking before departure for a visit to West Germany, Mr. Dayan insisted that they were not members of the PLO. Membership in the Organisation was illegal, and members would be arrested, he stressed. If the people he met were not in jail, then they could not be members of the Organisation, he argued.

Jonathan Carr adds from Bonn: Israeli and West German leaders are to hold talks here today which could help to clear away friction which has arisen between the two sides in recent months.

Mr. Moshe Dayan will have discussions with his West German counterpart Herr Hans Dietrich Genscher and with Chancellor Helmut Schmidt.

There have been clear signs of Israeli concern at contacts between members of the West German Government Coalition parties (though not of the Government itself) wtih representatives of the Palestine Liberation Organisation.

The Israelis are also said to feel that it is high time that Herr Schmidt took up a long-standing invitation to visit Israel.

These elements, combined with Herr Genscher's recent intensive contacts with numerous Arab countries, appear to have raised at least a question mark in Israeli minds over the true firmness of ties with Bonn.

Strauss starts Middle Eastern shuttle

BY OUR CAIRO CORRESPONDENT

President Carter's special Middle East envoy, Mr. Robert Strauss, has begun a Cairo-Jerusalem shuttle in search of backing for a renewed U.S. effort to involve Arab and Palestinian interests in the peace process.

The last American plan on these lines, involving a United Nations resolution mentioning Palestinian rights, was ignominiously abandoned when it met with outright rejection not only from Israel but also from Egypt.

A tight-lipped Mr. Strauss, perhaps chastened by his previous experience, said the President was waiting "exceedingly anxiously" for Egyptian and Israeli reaction before he decides on further diplomatic steps.

President Sadat's view is that the Americans should focus attention on step-by-step progress between Egypt and Israel on the questions of Palestinian self-rule and the status of east Jerusalem. Only once negotiations reach some form of agreement does President Sadat feel it sensible to seek Arab support.

Mr. Sadat is said to favour a three-way summit involving the U.S. to discuss these matters.

He fears wider American initiatives would complicate matters, divert American energies, and make the Israelis nervous and likely to retrench.

The Americans, concerned over oil supplies, have expressed a preference for achieving movement on the Arab front as speedily as possible.

President Sadat has drawn up his own plans to solve the Jerusalem issue, keeping Jerusalem a united city but splitting it into administrative units reflecting the various religious and ethnic interests.

President Sadat believes this plan, which he presented to Mr. Begin last week, along with suggestions on Palestinian self-rule, will provide the breakthrough that would "automatically" lead to Arab and Palestinian involvement, rather than through American alternative structures.

Mr. Strauss

Moderates prevail in Havana

By Anthony Robinson

THE NON-ALIGNED summit in Havana ended yesterday after an all-night plenary session approved a final document which condemned Israel, Egypt and the Camp David agreements.

In spite of deep divisions, the movement remains intact. Unity was preserved because the majority of the 94 members insisted on major amendments both to the political and economic sections of the final document.

Yugoslav President, Josip Tito, received a standing ovation at the final session. He thanked Cuba for acting as host, but pointedly called for more tolerance in future.

Cuban-led efforts to swing the movement over to a more radical, pro-Soviet stance, and what some delegates saw as Cuban abuse of its position as chairman, increased the determination of the majority here to cleanse the final document of its original radical language.

The final resolution now emphasises non-interference and non-intervention, and includes hegemonism, the code word for Soviet influence, as an enemy of the movement.

The economic section strongly criticises the trans-national companies, the present international monetary system, and calls for greater co-operation between the developing countries.

The document emphasises its support for liberation movements in Southern Africa,

Bonn curb on D-mark deposits

By Nicholas Colchester

THE WEST GERMAN Bundesbank provided new evidence last week of its vigilance against the emergence of a market in Deutschemark Certificates of Deposit or of floating-rate Deutsche Mark securities.

After discussions with the Central Bank, the Dresdner Bank, West Germany's second largest, agreed on Friday not to issue any more "vouchers" for D-Mark time deposits at a floating rate of interest.

The two banks said their discussions had established that the vouchers issued by Dresdner "in no way involved an issue of securities, CDs, or similar paper" and that the volume of the issues was of "negligible significance." But, they added: "The issue of further vouchers of this kind is not planned."

Dr. Otmar Emminger, Bundesbank President, explained later that two principles were involved. The first was the Bundesbank's continuing stand against D-Mark paper with floating rates of interest. (Floating rates are thought to constitute indexation, and therefore acceptance, of inflation.)

Second, the Bundesbank continues to prevent the emergence of a market in D-Mark negotiable certificates of deposit, partly because this might increase deployment of the D-Mark as a reserve currency.

Earlier in the week Dresdner had confirmed that it was making small quantities of non-negotiable deposit vouchers available at the request of investors, chiefly central banks.

Oil development cost 'could reach $110bn'

BY RAY DAFTER, ENERGY EDITOR

THE INTERNATIONAL energy industry will spend more than $20bn next year on the development of oil production in non-Communist countries. But that annual bill could rise to more than $110bn in real terms by the end of the century as the industry is forced to search for and exploit more hard-to-get oil.

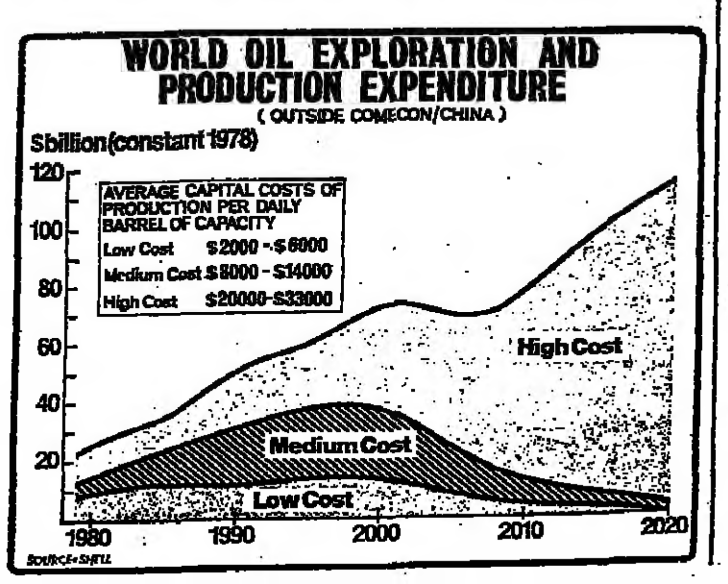
The warning of swiftly rising costs was made yesterday by Mr. Dirk de Bruyne, president of the Royal Dutch Petroleum Company and a group managing director of Royal Dutch/Shell, in his opening address to the 10th World Petroleum Congress in Bucharest.

"As the transition towards much higher-cost development projects begins to pick up speed, companies and governments alike could find themselves taking on some fairly sizeable financial burdens," he said.

Mr. de Bruyne cited the North Sea as an indicator of the way development costs were rising. Offshore fields in the British and Norwegian sectors cost an average $8,000 per daily barrel of output to develop, he said. "Whether we like it or not, costs of this order will soon be routine for a significant part of the industry's new production, perhaps up to 10m b/d by the late 1990s."

Mr. de Bruyne said that the bulk of the world's output to date had been low-cost; defined as production with a capital cost averaging about $2,000 per daily barrel of production. (Thus a field producing 100,000 b/d would cost $200m to develop.)

High-cost oil, incurring expenditures between $20,000 and $33,000 per daily barrel (at 1978 prices), would have to meet much of the world's needs after the turn of the century.



£15m executive jet sale for B. Aerospace

BY MICHAEL DONNE, AEROSPACE CORRESPONDENT

BRITISH AEROSPACE, the State-owned aircraft manufacturer, has in the past week sold seven of its BAe series 700-125 executive jets worth a total of about £15m, all of them to North American operators.

This deal, the biggest in a single week yet achieved by *British Aerospace for its* business jet, brings the total of 125s sold to date to more than 450, worth about £480m, in terms of current values, of which over 80 per cent has been exported to 29 countries.

Production of the BAe 125 jet is now running at three aircraft a month in the State aircraft group's Hatfield and Chester divisions, and a further batch of orders is now in negotiation. Production is sold out through to the end of 1979 and well into 1980.

British Aerospace announced its deal at the sixth International Business and Light Aviation Show, at the Cranfield Institute of Technology in Bedfordshire, and which concluded at the weekend. Some 70 different types of business and light aircraft were on display with well over 100 different exhibitors.

● Air Portugal has signed a letter of intent to buy three Lockheed TriStars worth more than £76m, with an option on two more, writes our Aerospace Correspondent. The deal still awaits Portuguese Government approval. If confirmed, it will bring £35m of business to Rolls-Royce, suppliers of the TriStar's RB-211 engines.

Paul Betts adds from Rome: Alitalia is understood to have requested the official approval of IRI, the parent company, and the Government for the purchase of a number of Boeing 747s to replace the order for six DC-10s cancelled last month.

Finn-Soviet pact near

BY LANCE KEYWORTH IN HELSINKI

THE VALUE of Finnish-Soviet trade exchanges in the five-year period 1981-1985 is expected to rise to about FM 72bn (£8.4bn), *compared with some FM 60bn* during the five-year period ending in 1980.

A Soviet delegation led by Mr. A. N. Mansjulo, the Deputy Foreign Trade Minister, has started the second round of negotiations for the new trade agreement in Helsinki last week. The agreement is *expected to be signed later this* month in Moscow.

Finnish-Soviet trade has expanded steadily since the first agreement entered into force in 1951.

Diplomatic talks may affect UK, Chile trade

By Lorne Barling

WITH BRITAIN'S trade with Chile now running sharply into deficit, the outcome of talks on restoring diplomatic relations between the two *countries could be vital to the* success of a British trade mission there next month.

Britain has traditionally run a deficit with Chile, but in the first six months of this year the value of imports nearly doubled compared with the first half of 1978, rising to £75.7m.

Exports to Chile have stagnated over the past five years at around £37m a year and were valued at only £17.2m in the first six months.

The recent increase in the value of imports was due mainly to increases in the value and volume of copper bought from Chile, which accounts for around 70 per cent of imports.

The British mission to Chile is being mounted by the Birmingham Chamber of Commerce *and Industry*, which believes there is considerable potential for exports, which would be greatly improved by the restoration of diplomatic links.

Companies being represented on the visit, due to take place towards the end of October, include Balfour Beatty, TI Export, Paterson Candy and John Lewis.

Closer company links forecast in heavy vehicle manufacture

FINANCIAL TIMES REPORTER

FURTHER concentration is likely in the world market for *trucks*, *farm machinery* and construction equipment as the leading manufacturers seek to reduce costs and maximise economies of scale.

According to a study of the U.S. industries published today by the Economist Intelligence Unit, the need to participate fully in the "one world" market gives a distinct advantage to the "broad line" manufacturer who can produce for all market sub-segments.

"The clear trend is towards the emergence of more and larger multinational corporations which strive to broaden their product range further, *either by investing in new production* facilities themselves or by acquiring short-line companies which specialise in the product lines they do not themselves manufacture."

The study refers to a number of joint ventures and associations between U.S. and foreign companies, such as Caterpillar with Mitsubishi, John Deere with Yanmar of Japan and J. I. *Case* with Poclain of France. At the same time European companies, such as Renault, have acquired equity interests in U.S. concerns.

According to the study, the further concentration of the three industry groups on a worldwide scale will provide challenges to the U.S.-based manufacturers who, by reason of their research, development and marketing skills, have maintained a formidable technological lead over all rivals.

"This lead is presently narrowing in the face of challenges from both Japan and Western Europe, while emerging industrial countries like Brazil loom as threats for the future, particularly in overseas markets."

New developments in electronics and hydraulics offer opportunities for innovation in vehicle design. The future *prosperity of the U.S. industries* will depend on their success in identifying, at an early stage, the market sectors where these techniques can be applied and in solving the related technological and production problems.

The report includes profiles of 60 of the principal U.S. manufacturers of finished products or components.

"The concentration and diversification of the self-propelled heavy machinery industries in the U.S.A." Economist Intelligence Unit, £60.

France favoured to win E. German truck contract

BY LESLIE COLITT IN BERLIN

NEGOTIATIONS HAVE moved into high gear over the largest *industrial project* East Germany is offering Western companies, a DM 2bn (£500m) modernisation plan for the East German truck industry.

Four Western companies—Guest Keen and Nettlefolds, Peugeot-Citroen, Fiat and Volvo—have submitted offers on a range of plants to be built and equipped at Ludwigsfelde, the site of the IFA truck works.

A decision on awarding contracts for the first of some 12 stages of the truck project is expected this autumn, after a delay of several months. East Germany wants to pay with 100 per cent counter-purchases by the *Western companies of* East German products, but it is not insisting on delivering output from the new truck component plants.

Last year, Citroen won a *DM 800m contract* to build a plant for producing constant velocity joints at Zwickau, where the East German Trabant car is manufactured. Citroen clinched the contract largely because it is going to take 300,000 units annually from the factory in payment.

A high-level East German delegation headed by Herr Guenter Mittag, the Politburo's economics specialist, is going to Paris later this month, and the French are hopeful of yet another successful deal with the East Germans.

East Germany's President Herr Erich Honecker, made a point of visiting the Citroen *stand last week at the autumn* Leipzig fair and expressed the hope that the "current negotiations on new projects will be successful."

GKN, however, is eager to win contracts for several of the eight different areas of vehicle component manufacturing being negotiated with the East Germans. One of them is for the construction of a forge to turn out a complete range of truck components.

The company has noted that the East Germans are well aware of GKN's technology leadership in this field as they buy GKN forgings and transmission drive parts.

GKN also feels it is dealing from a position of technological strength in its negotiations with East Germany on plants to produce clutches, axles and wheels.

S. Africa to participate in motor parts deal

BY BERNARD SIMON IN JOHANNESBURG

ZAHNRAD FABRIKEN of West Germany, Europe's largest gearbox maker, is to join General Mining of South Africa and the state-owned South African Industrial Development Corporation in a project which will make South Africa virtually self-sufficient in commercial vehicle gearboxes and steering boxes.

Another foreign company, whose identity has not yet been disclosed, is likely to participate later in the local manufacture of rear axles. The total cost of the venture will be about R120m (£65m). Zahnrad Fabriken (ZF) has already committed itself to investing R10m of the total of R40m required for the first stage of the project, namely the production of 15,000 gearboxes a year by 1983.

ZF will also provide technical know-how and training. General Mining and its associate companies, Sentrust, Sanlam and Federale Mynbou, have guaranteed their R20m share of the financing and will put up another R10m should the IDC decide not to join the consortium.

A new company is to manufacture the gear and steering boxes which are, at present, all imported. It plans to expand a plant west of Johannesburg currently occupied by Sandock Austral, another General Mining subsidiary, which currently makes only a small number of specialised gearboxes.

The second stage of the project will increase output to 30,000 boxes a year and will provide for the manufacture of rear axles.

Russian imports decline

BY OUR MOSCOW CORRESPONDENT

SOVIET IMPORTS from Britain and the U.S. declined slightly from 1978 levels in the first half of the year, according to figures released by the British and U.S. Embassies.

British exports were provisionally pegged at £245.2m in the January to July period, a 2 per cent drop over the same period of 1978.

Imports from the USSR rose 16 per cent to £406.6m, putting the seven-month deficit at £161.5m or 63 per cent more than a year ago.

U.S. sales to the Russians totalled $1.45bn in January-June, a 4.3 per cent drop from last year. Imports from the USSR fell 6.8 per cent to $243.4m.

But American exports of non-agricultural items rose 41.7 per cent to $378.2m, reflecting more contracts for oil and gas equipment.

Large Soviet grain purchases at higher-than-1978 prices have yet to make their impact on the U.S. export figures.

EFTA fears recession

BY SRIJ KHINDARIA IN GENEVA

THE SEVEN countries that are members of the European Free Trade Association (EFTA) experienced a revival of economic activity in the 12 months to the end of *June 1979* but are now entering a period of uncertainty amid growing fears that a recession may grip their economies.

In overall terms the EFTA *countries have notched up* better economic performances than Common Market members since the 1973-74 oil prices increases, but the latest sharp upturn in oil prices applied in March and June this year has jolted their economies.

EFTA's latest annual report says that its members improved their balance of payments situations during 1978 and that rates of unemployment remained low by current Western European standards. The rate of inflation was also reduced in most members of EFTA, which comprises Switzerland, Austria, Sweden, Norway, Finland, Iceland and Portugal.

The expected repercussions of higher prices for oil and other raw materials on business confidence and balance of payments has given rise to "widespread concern" about the ability of industrialised countries to avoid a lower rate of economic growth," he report says.

"Close international co-operation remains a prerequisite for achieving economic growth, together with full employment and price and monetary stability," it emphasised.

SHIPPING

Heavy demand for large tankers in Middle East

BY LYNTON McLAIN

THE oil tanker market continued to show improvements in freight rates last week, with very large and ultra large crude carriers in particular demand.

There was a shortage of capacity in some oil loading areas. In the Middle East several ULCCs were chartered at Worldscale 47½ for discharge in the west. A U.S. charterer paid Worldscale 50 for a 312,000 deadweight ton vessel.

The rate for larger VLCCs was in the high Worldscale 50s, although one owner obtained Worldscale 60 from a Swedish charterer for a 275,000 ton vessel.

In the market for medium-sized tankers, a 78,000 ton vessel gained a charter to India from the *Middle East at Worldscale* 127½, and a 30,000 ton vessel for Japan at a rate of Worldscale 400.

There was activity in the West African markets last week but in the Mediterranean sector and in the Caribbean, there was evidence of tanker overcapacity.

Tanker tonnage, which operated in the grain trades last week continued to attract only modest rates.

London brokers forecast that there was little chance of the pattern of chartering changing greatly over the next few months, particularly as the months before winter are traditional periods of demand for oil.

Brokers also reported that growing tanker activity in the North Sea is likely to continue, as more production is exported. The grain trade in the Atlantic continued last week to show little activity as the large U.S. lakes ports remained strike-bound. Rates, however, may rise towards the end of the season as soon as the strike is over.

World Economic Indicators

UNEMPLOYMENT

		Aug. '79	Jul. '79	Jun. '79	Aug. '78
UK	000's	1,264.7	1,278.7	1,279.6	1,392.1
	%	5.2	5.3	5.3	5.8
U.S.	000's	6,149.0	5,848.0	5,774.0	6,002.0
	%	6.0	5.7	5.6	6.0
Germany	000's	798.8	804.0	763.0	923.9
	%	3.5	3.5	3.3	4.0
		Jul. '79	Jun. '79	May '79	Jul. '78
Netherlands	000's	211.8	214.6	211.1	206.5
	%	5.1	5.1	5.1	5.2
		Jun. '79	May '79	April '79	Jun. '78
France	000's	1,233.0	1,258.9	1,290.6	1,039.0
	%	5.1	5.5	5.1	4.7
		May '79	April '79	Mar. '79	May '78
Belgium	000's	285.4	289.7	294.2	276.7
	%	7.2	7.3	7.4	6.9
Japan	000's	1,110.0	1,240.0	1,350.0	1,230.0
	%	2.0	2.2	2.1	2.3
		April '79	Jan. '79	Oct. '78	April '78
Italy	000's	1,580.0	1,632.0	1,651.0	1,450.0
	%	7.8	8.1	7.5	7.2

هكذا من الأصل

"BEST FAMILY CAR- OVERALL CAR OF THE YEAR-"

What Car?, April 1979.

"I FEAR THAT I SHALL NEVER FEEL SO MUCH AFFECTION FOR A CAR EVER AGAIN."

Car Magazine, April 1979.

"What Car? Annual Review"

"This year we decided to vote for our Car of the Year again – and have chosen the Peugeot 305SR."

"Over the past year we have tested more than 120 cars."

"As last year we are splitting the wide variety of cars we have driven into various groups, but this time the categories are slightly different."

"Each class has its own winner, found by awarding cars points out of 100 under a total of five headings, with a maximum of 20 points on each count."

"In the end we arrived at nine individual group winners, one of which turned out to have the highest overall total. This year our Car of the Year is the Peugeot 305SR."

"The 305 is a slightly up-market four door family car. It is French, with a front engine driving the front wheels. It has four doors, enough room for four adults and their luggage, is reasonably fast, handles safely and is well equipped."

"The Peugeot 305 combines the advantages of space and safety offered by front wheel drive, while retaining a traditionally shaped, roomy body. It offers a degree of comfort and luxury unusual in a car of the class – the opposition will have their work cut out to match its stylish ride."

"The 305 is typically Gallic, with front wheel drive, and a thoroughly sensible approach – a large boot for luggage, large passenger area and a transverse engine up front. The 305 is also blessed with one of the best gearchanges we have ever come across... so light and precise that changes can be slurred making passengers think it's an automatic. Our Car of the Year offers smooth luxury unusual in a car of this class."

"French car manufacturers seem to have found the knack of producing everyday cars with the sort of luxurious ride comfort found only in limousines. Peugeot's new 305 range is a case in point – aimed squarely at the family man as his regular transport, and yet offers the sort of comfort a chauffeur driven executive would expect."

"The success it has already had is well deserved and we can be certain that it will still be in production in ten years time – something that can't necessarily be said of its rivals here."

What Car?, April 1979, Annual Review and comparative test with Fiat Supermirafiori, Princess 1700 HL, Renault 18TS.

Car Magazine- "A long term test with a difference"

"Just one of the astonishing things about the 305 is how well it handles."

"... the gear change for example: it is not only the nicest to be found in any front-wheel drive car but it is also one of the very nicest to be encountered in any car."

"The rest of the credit presumably goes to the transverse location of the engine, the block of which is tilted 20° forward to make things even better. Space saving under the bonnet has not been taken too far, though, for although there is not much space wasted there is room to get at the things that are likely to need attention, even if nothing ever actually did."

"The 305 suspension, like that of its big brother 604, must surely represent the state of the car-builder's art."

"Just as nothing seemed to be consumed, likewise nothing seemed to deteriorate. The finish looked everywhere as good at 9000 miles as on delivery."

"... the cabin was impressively roomy: once again the long wheel-base might have something to do with it, for the car is not over-long overall, being an inch shorter than a Cortina."

"The Peugeot's controls are excellent, well-sited and have superb actions. The instruments are easily seen and tell no lies, and the night lighting of the facia is first-class. There is a complex array of heated and fresh air vents, yet the controls are straightforward, even to the first-time driver."

"On almost every count, the 305 is highly competitive with its obvious rivals, most obviously in matters that can be quantified and set down in figures but most convincingly in the sweetness of its behaviour."

"It is difficult to overstate this case, hard to think of any other car short of a Rolls-Royce in which the controls feel as though they have been matched and lapped and polished and hand fitted by a jeweller, and impossible to imagine how Peugeot have achieved this in mass production."

"In the absence of any serious faults or many trivial ones, it seems almost tedious to keep on piling up praise for the way this car behaved, but it would be unjust not to do so. With such exemplary manners, such silken feel, such admirable comfort and such unfailing reliability, the Peugeot 305 must obviously be a very good car. What made it even better was its ability to rise to the occasion, to meet requirements that ought to have been beyond the normal call of duty."

"Never have I encountered a car that could serve for so long without letting me down in any way, that could serve so satisfactorily for such a variety of journeys, and that could sustain such astonished delight over its virtues, as did this 305."

Car Magazine, April 1979. Long term test and comparative test with Renault 18GTS and Honda Accord.

Please send me full details of these articles. 343

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Labour Left may clash with union leaders

BY PHILIP RAWSTORNE

TRADE UNION leaders are expected to mount strong opposition today against the moves by Labour's Left-wing to extend its influence in the party.

The clash is likely to come over proposals for an inquiry into the party's organisation.

Union leaders, headed by Mr. David Basnett and Mr. Moss Evans, are to meet members of the Labour national executive's left-dominated organisation committee to discuss the issue.

The unions are seeking a wide-ranging inquiry into the party's constitution, structure and finances. They will propose that it should be carried out by a team comprising eight members of the national executive, five trade unionists, three MPs and the party's leader and deputy leader.

Its report would be debated and any reforms voted upon at a special party conference early next year.

The union leaders are demanding that, in the meantime, the left should drop its attempts at next month's conference to re-write the party's rules on the election of the leader, the re-selection of MPs and the drafting of the manifesto.

It is claimed that these moves—widely seen as a bid by the left to increase its power—would pre-empt any inquiry. Union leaders have hinted that their financial support may be withdrawn and their block votes cast against the left-wing proposals if their demands are not met.

Mr. Ron Hayward, Labour's general secretary, welcomed the trade union plans for an inquiry. It could "produce sensible proposals that will strengthen the party and prepare it once more for Government."

Mr. Hayward said there was a definite need to examine the machinery for drawing up the manifesto and for more consultation within the party.

Leading Left-wingers reacted angrily to the union demands. They declared that they would not bow to any "self-appointed undemocratic pressure groups" and would resist any attempt to change the conference agenda.

Mr. Anthony Wedgwood Benn and Mr. Eric Heffer will press at a meeting of the party's home policy committee today for the NEC to issue its recommendations for revisions in the manifesto drafting procedures before the Brighton conference.

Mr. Denis Healey, the former Chancellor, warned at the weekend that Labour would not regain power by wasting energy on sterile wrangles about the party constitution. Labour had lost the election because of the winter's industrial strife—not because of its leadership or its policies.

Referring to Mr. Benn's proposals for curbing the power of the party leader, Mr. Healey said: "I could not help reflecting that it sounded very much like a dog without a tail trying to persuade other dogs to cut their tails off too."

Inner cities 'need small companies'

BY ELAINE WILLIAMS

CITY COUNCILS are being urged to take immediate steps to attract small businesses back to the inner cities.

The Confederation of British Industry says that urgent action is needed to end city centre decay and to create much needed jobs. It gives its proposals in a report published today called "Smaller Firms and the Inner City Problem."

The CBI calls upon councils to end red tape which holds up planning permission and allow for the provision of more houses for people who will work in the up and coming inner city factories and workshops.

The report, which has been sent to government ministers and the Association of Metropolitan Authorities, says that local councils should stop hoarding land and throwing the book of planning regulations at the "small man."

If obstacles were removed, small businesses could play a vital role in improving the economy of inner cities according to the report.. But although there are signs of change, local authorities are not doing enough to follow the Government's lead in helping small companies, it claims.

Removal of obstacles include the partial de-rating of all business premises according to the CBI. Another is to allow people to start their businesses from home so there should be a minimum of restrictions on the use of homes for business purposes, providing there is no nuisance or hazard to the public.

The report accuses existing planning regulations of often keeping old buildings empty and unused because of the difficulty of recouping the necessary expenditure.

Mixed development, the report says, with offices, factories and workshops peppered around was a more appropriate pattern for the inner city than drab uniform development.

It called upon the local authorities to sell off surplus land in modest sized parcels to encourage a good mixture of enterprise. The Greater London Council meets today to decide whether to sell off 28 parcels of land to private enterprise but this is restricted to housing development around London.

Conservatives to review Inland Revenue powers

BY DAVID FREUD

THE GOVERNMENT plans to review the Inland Revenue's powers to enter and search premises after Lord Denning's judgment in the Rossminster case last month.

Lord Denning, Master of the Rolls, ruled that the Revenue overstepped its powers in the raids on premises connected with the Rossminster group of financial companies. This was because the warrant was too widely drawn.

The Revenue is appealing and the Government will wait until the Law Lords have published their decision on the case before reviewing the Revenue's powers.

The appeal to the Lords is due to be heard on October 29, and the hearings are likely to last two or three days.

Written judgment normally takes about eight weeks although the Lords may give an immediate oral judgment if the issue is considered urgent.

The Government favours Lord Denning's tight interpretation of the legislation governing the Revenue's search and entry powers when it suspects that there may have been tax evasion and that documents may prove it.

Warrant

Lord Denning argued that the warrant under which the search was carried out should specify what crimes were suspected. This would give those suspected a fair warning and put the legislation in line with the laws of arrest, where the charge must be specific.

So, if the Denning interpretation is over-ruled by the Lords, the Government is likely to consider restoring it through legislation.

In 1976 the Tories voted against giving the Revenue the search and entry powers to gather evidence, and the Labour Government carried the relevant clause in the Finance Bill by a narrow majority.

The Government feels that the conduct of the raids has confirmed its worst fears about allowing the Revenue such wide powers.

However, the Revenue is likely to put up strong opposition to any changes in its ability to collect evidence without giving away the basis of its suspicions.

It believes it is already suffering severe handicaps in its battle to curb evasion, particulaly as it estimates that the black, or tax-evading, economy is growing rapidly and may represent 10 per cent of gross domestic product.

New nuclear power safeguard

BY DAVID FISHLOCK, SCIENCE EDITOR

ANY IDEA that new nuclear power technologies might be adopted which are inherently unsuitable for making nuclear weapons has been ruled out in a draft report from the international nuclear study called for by President Carter in 1977.

The study, known as the International Nuclear Fuel Cycle Evaluation (INFCE), was agreed by the seven heads of State at the economic summit in London, in their search for tighter controls over nuclear proliferation.

Final comments on the draft report, called for by September 25, will be shaped by the annual conference of the Uranium Institute, which opens in London tomorrow. The meeting will hear papers on world uranium supply and demand, and on the future of

President Carter's original purpose was to justify a new domestic nuclear policy, which forbade reprocessing of spent nuclear fuel and severely curtailed the development of fast-breeder reactors.

The U.S. Administration held that there were ample reserves of uranium for large nuclear programmes without the need for fast reactors. Fast reactors will recycle the plutonium by-product of present-day reactors.

The U.S. exercised strong pressure on Britain and France not to embark on large-scale commercial reprocessing of spent nuclear fuel and the separation of "weapon-grade" plutonium, and on Germany not to use plutonium in its existing reactors.

The 80-page draft report now circulating among the 50-odd nations which participated has been written by Prof. Abram Chayes, its American chairman, who is professor of political science at Harvard.

Failure

It summarises the views of eight working-groups, each led by a different group of nations, dealing with such aspects of nuclear technology as plutonium and its separation, uranium reserves, and fast reactors.

The U.S. has failed to persuade other nations that technologies exist which cannot be diverted into the manufacture of nuclear weapons. It has also failed to persuade other nations that there will be abundant supplies of uranium available—from the U.S. itself, for example—and, hence, to defer their commercial development of fast reactors.

Even within the U.S., there is sufficient scepticism about the Government's view of both subjects to prevent a halt to Clinch River, the U.S. demonstration fast reactor—mainly funded by the Government—for the third successive year, in spite of President Carter's pleas.

But the U.S. has gone a long way towards persuading other nations that the economic case for using plutonium in today's reactors, as an alternative to using enriched uranium, is not a strong one.

Its scientists have demonstrated that advantages of the same order can be secured by the more efficient use of uranium, for less trouble and no greater risks of weapon proliferation—such as plutonium recycle might introduce.

On the basis of INFCE draft report, however, the U.S. Administration will have considerable difficulty in justifying the unilateral stance it adopted on nuclear industry control in the spring of 1977.

The final report is expected to be ready in November, for discussion at a conference in Vienna in February, 1980—election year in the U.S.

SDLP condemnation for IRA activities

BY OUR BELFAST CORRESPONDENT

THE SOCIAL DEMOCRATIC and Labour Party, the main Roman Catholic Party in Ulster, yesterday bitterly condemned the activities of the Provisional IRA, following the outrages of two weeks ago.

It said: "Who would want to live in an Ireland created by people engaged in such acts?"

The party statement came at the end of a weekend policy conference at a County Donegal resort in the West of Ireland.

The SDLP complained strongly about the lack of British political debate on Ulster. Northern Ireland had not been an issue in the General Election, nor was it on the agendas of the annual conferences of either major British party.

The SDLP, which is led by Mr. Gerry Fitt, declared: "Such is the priority given to this question by those who claim to govern Northern Ireland."

It also criticised the Dublin Government, which, it said, increasingly wanted to distance itself from the Northern Ireland problem.

On the issue of security, the party said the Irish Republic clearly had a role to play in the situation in Ulster. There would be no movement towards a restoration of normality unless both the British and Irish Governments worked together.

'Encourage jobs for disabled'

COMPANIES should be rewarded for taking on disabled employees, according to the British Limbless Ex-Service Men's Association.

In a review published today, the association suggests that a levy hould be raised from all employers. Substantial refunds should be given to companies employing reasonable numbers of disabled people. The present 3 per cent quota is inadequate, the review says.

Trustcard discount on private health care

BY ERIC SHORT

HOLDERS OF Trustcard, the Trustee Savings Banks' VISA charge card, can now get a 15 per cent discount on medical insurance premiums.

TSB Trustcard has linked with the British United Provident Association, the UK's biggest medical insurance agency, to form the Trustcard/BUPA group scheme.

Cardholders will qualify for a 15 per cent reduction on the normal premium rate for BUPACARE, the medical insurance contract marketed by BUPA for individuals.

Cardholders would pay policy premiums either annually or quarterly by Trustcard, thus having an interest free period of at least 25 days before premiums are due. Cardholders would be billed in the usual way. At present there are 475,000 Trustcard holders.

BUPA have for many years given a 15 per cent discount to schemes arranged through professional or trade organisations. The reduction in premium reflects the additional volume of business arising through such schemes. BUPA has arranged a number of schemes with credit cards.

Marks and Spencer cuts prices to boost sales

BY ELAINE WILLIAMS

MARKS AND SPENCER begins tomorrow a four-month programme of price cuts, worth about £11m.

Reductions of up to 10 per cent will be made on some items. These include duvets, blankets and towels, kitchen-ware, and table accessories.

The company is also attempting to increase its market share and boost volume sales, which have fallen sharply since valued added tax was increased in June.

Marks and Spencer's UK suppliers are also cutting their prices. They want to prevent, or lessen, the effect that a continued drop in sales would have on production and their workforces.

Polio still a major disease

By David Fishlock, Science Editor

POLIO IS still a major disease world-wide and a significant threat in Britain, in spite of effectiven vacciees, the Office of Health Economics warns in a report published today.

The office, funded by the British pharmaceutical industry, says poliomyelitis is one of six diseases which, between them, kil about 5m infants in their first year and maim as many again each year.

The other five diseases are diphtheria, whooping cough, tuberculosis, tetanus, and measles.

The office urges public support for an international World Health Organisation scheme for vaccinating against all six diseases.

Polio's impact is likely to increase with rising standards of hygiene in developing countries. This trend increases the chances of a child's contracting the disease later—and after the age of three the risk of its proving disabling is greater.

* Immunisation for Everyone—the Polio Example. OHE Briefing Number 8. Office of Health Economics, 162 Regent Street, London W1R 6DD. 20p.

UK NEWS

Edwardes is likely to warn BL unions of big redundancies

BY ARTHUR SMITH, MIDLANDS CORRESPONDENT

SIR MICHAEL EDWARDES, BL chairman, is expected to warn union leaders today that the price of additional Government finance could be large-scale redundancies.

He will take the oportunity with the announcement of the half-year results he will give a gloomy review of market prospects. Profits for the first six months are seriously down below hopes, but BL is likely to show a small surplus.

More serious is BL's disappointing UK market share, and the impact upon overseas earnings of the high value of sterling.

Against the deteriorating market position the company is preparing its five-year plan for submission to the National Enterprise Board and the Government next month.

Failure to generate funds would force BL to press the Government for finance in addition to the £225m Sir Michael hopes to take up in the current financial year.

Sir Michael can be expected to confront union leaders with the need to make dramatic improvements in productivity if BL is to remain viable.

Factories under consideration for cuts in the current review are the Triumph factory at Canley, Coventry, with 8,000 workers; Speke, Liverpool, with 2,000; MG at Abingdon with 1,100; and Austin-Morris, Seneffe, Belgium, with 2,700.

Sir Michael will be meeting national union leaders this morning and shop stewards this afternoon. The reaction he receives to the company plans will clearly be a factor influencing the Conservative Government's attitude to funding the State corporation.

● NEWS ANALYSIS—COMMERCIAL VEHICLES

An industry ripe for change

BY KENNETH GOODING, MOTOR INDUSTRY CORRESPONDENT

PSA PEUGEOT-CITROEN has been carefully analysing the Dodge Truck business it picked up when it acquired Chrysler's European interests in January, a deal which turned PSA into Europe's biggest car manufacturer.

The questions were: "Do we want to be in the trucks business? If we do, what route should we take with Dodge?

Now we know. By encouraging Dodge to go ahead with a possible cooperative arrangement with DAF of Holland—reported in Saturday's Financial Times—PSA has made it clear that it is in the trucks business for good and plans to put investment behind the operations.

Yet with an annual output of about 30,000 commercial vehicles, Dodge is in the minor league compared with Daimler-Benz of West Germany and IVECO, the Fiat-dominated group, which produce about 240,000 and 109,000 respectively.

Dodge's "home" markets, Spain and the UK, represent only 30 per cent of potential European business. The company needs new products and a larger range fairly quickly, which would involve massive investment.

Designing and bringing a new truck to market would cost at least £50m, and even then it would incorporate an existing drive train (engine, gearbox and axles). Developing a new engine would probably cost £200m, and a new gearbox £100m.

It makes sense to incur such heavy costs only if they can be spread over a big enough volume to keep the price of the truck reasonable.

At the lightweight end of the market this problem can largely be overcome by incorporating many car components, but from about 3.5 tonnes gross upwards, the use of car components stops. Dodge Trucks, however, has been restructured so that its products start at 3.5 tonnes.

The co-operative arrangement with DAF, if it goes through, would enable the two companies to spread the fixed cost of component engineering and production over a larger output.

Would this be enough for Dodge? IVECO has estimated that a group needs an output of at least 100,000 commercial vehicles a year to reap the full benefits of economies of scale.

With this in mind PSA is forming what might turn out to be the nucleus of a new European commercial vehicle "club."

It could quickly attract further members given that the European industry, beset by problems of over-capacity, steeply rising costs and relatively static demand, is ripe for restructuring.

By 1999 we might see a group in which Dodge, DAF, MAN of West Germany, Leyland Vehicles of the UK and Renault Industrial Vehicles, for example, were linked in a kind of federal structure.

Such a group would have significant shares in most "domestic" markets—France, Germany, the Benelux countries, Spain and the UK. It would be in a position to take on the strongest Japanese and U.S. competition in the developing countries and the Middle and Far East, the "neutral" overseas battlefields.

Competition in Europe would not suffer because there would still be three or four very strong domestic groups after the business.

All the signs point to Dodge and DAF working out an arrangement by the end of this yea. Apparently the companies' representatives have been getting on well and respect each other's views even if they do not always see eye to eye.

Meanwhile, Dodge is pressing ahead with moves to improve its European distribution network —without good dealers no product can be successful. PSA bought the French Dodge distribution business earlier this month and has been looking at the other European markets to sum up the quality and financial strength of its dealerships.

Any link between Dodge and DAF would pose a problem for International Harvester, the U.S. concern which is one of the world's largest truck makers and which bought a 33 per cent stake in DAF in 1972 as a potential base for expansion into Continental Europe.

The two groups have never got on very well and hardly any of the expected benefits have emerged. Mr. Piet Van Doorne, DAF's president, has frequently made it clear that his family trust will not sell its 44 per cent shareholding in the company to International Harvester. Another 25 per cent is in the hands of the Dutch Government.

The American group has restructured its business at home and is involved in thorough research to see which way it should move in Europe. The most obvious outcome after Friday's news is for it to sell off the DAF interest.

But Mr. Van Doorne would probably be rather upset if the stake went to PSA, for the time being at least.

Talbot-Lotus launch new 'image' car after delay

THE FIRST new car to be launched under the name of Talbot goes on sale at 61 selected dealers today.

The Talbot Sunbeam Lotus, a high-performance version of the Linwood-built range of Sunbeam hatchbacks, will also be launched in Germany and France during the next few weeks.

Under the Talbot-Lotus agreement, the car is built at Linwood, then transferred to the Lotus satellite factory at Ludham, Norfolk. There it is fitted with a specially developed 2.2 litre engine and five-speed gearbox.

Production of the £7,000 car is limited to 4,500 models over three years. There is an option for more to be built,

The sales target is about 300 cars a year in the UK, 600 in France, and smaller volumes in other European countries.

The "image" car was originally to have been introduced to the UK market in May. But the launch was delayed by the change in ownership of Chrysler from American hands to French.

The engine is basically a detuned version of that used by Talbot's motor sport department in its rallying cars.

New Volkswagens 2.7% dearer

BY ELAINE WILLIAMS

VOLKSWAGEN is to increase prices on its 1980 model range by an average of 2.7 per cent.

This is the first price rise VW has announced in Britain since January and is the lowest made by any company since 1975.

VW and Audi models will be affected by the increase when they become available from mid-September.

The basic costs of a Polo three-door N 900 cc will be £2,363; with car tax and VAT added this will be £2,943.91. Similarly the lower end of the Golf range will cost £2,615 while the top end will be £4,122. After tax is added, the prices are £3,257.86 and £5,135.33.

An Audi LS will cost a total of £5,028.18. The top end of the 100 model range, the Avant CD5E automatic will be £9,748.16.

Government to announce Post Office split plans

BY MAX WILKINSON

THE GOVENMENT'S plans to split the Post Office's telecommunications service from the smaller postal business are expected to be announced this week.

Ministers are also expected to indicate how they intend to allow private companies to compete with the Post Office for the supply of certain types of equipment.

A draft Bill to give effect to these changes is being prepared by the Department of Industry and is expected to be introduced in the next session of Parliament.

The splitting of the Post Office was recommended two years ago by the committee of inquiry under the chairmanship of Sir Charles Carter. The Post Office supports the idea of the split, although the unions are divided.

The Post Office Engineering Union (POEU), whose members would be working for the profitable and expanding telecommunications business, like the idea of a split. However, Mr. Tom Jackson's Union of Post Office Workers (UPW), whose members would be in an almost certainly unprofitable business is not in favour of the split.

One of the main problems which the Post Office has to face in the next decade is the increasing overlap between services offered by telecommunications and the traditional surface mail.

Transmission

The transmission of computer data by wire is already reducing the need for paper communications in many organisations. Advances in technology will soon make it economically feasible to send exact copies of letters including signature and letterheads by facsimile transmission over telecommunications links.

The facsimile transceivers which already exist are not yet widely used for communication between different businesses, because of problems of compatibility and cost. However, their use will certainly become more general during the 1980s.

If the Post Office were not split, the UPW might well try to frustrate or slow down these developments in order to preserve its members' jobs. However, after a division, the UPW would have little influence over the development of new telecommunications services. Moreover, the POEU would have a strong vested interest in allowing the expansion of services to take place, so that more revenue and more jobs for its members would be created.

The new technology will also call into question the definition of the Post Office's monopoly, independently of the Government's desire to open up the market to private competition.

The clearest example is the future of Telex, which is at present a Post Office monopoly. The Post Office provides a complete service which includes the equipment for receiving and sending messages.

However, some 43 different manufacturers are selling electronic typing systems, many of which have the capacity for sending and receiving text over the telephone wires.

Loudspeaker maker to cut jobs

BY ELAINE WILLIAMS

THERE ARE signs that British loudspeaker manufacturers are beginning to find competition increasingly difficult in both home and overseas markets.

Goodman's Loudspeakers, part of the Thorn Electrical Group and a major British manufacturer, has told its workforce it needs to make a small number of redundancies to help it compete more effectively.

It is to cut about 24 jobs from its present workforce of 600. It hopes further redundancies will not be necessary.

Loudspeaker and other hi-fi and equipment manufacturers faced over-capacity in the industry. Goodman, which is 79 per cent owned by Thorn and 21 per cent by Plessey, supplies loudspeakers for use in audio and television products. The greater part of its production is exported and it cannot afford to lose its price competitiveness in overseas markets.

Last month Mr. Grahame West, marketing manager of Rank Hi-Fi, which has 20 per cent of the British loudspeaker market, warned that UK manufacturers should not become complacent about foreign competition, especially from Japan.

He said that some companies would "fall by the wayside" as bigger brand names tried to increase their share of the fragmented UK market.

Light bulb legislation call is rejected

By Lynton McLain

THE GOVERNMENT has rejected a call by MPs on the Science and Technology Select Committee for light bulb makers to be compelled to give performance information on packets.

The MPs said in a report in December that the life and light output of household bulbs should be the subject of an official "marking order" under the Trades Description Act 1968.

This was needed, they said, because energy costs were now greater than in 1971, when a similar call was rejected by the then Trade Secretary. Also, the markings would increase consumer awareness of the choice available.

Standard

But Mrs. Sally Oppenheim, Minister for Consumer Affairs, in a White Paper replying to the suggestions, said the Government favoured encouraging makers to provide extra information voluntarily. The Government rejected all calls for legislation as recommended by the committee.

The Lighting Industries Federation has accepted the MPs' call for a suitable standard to be drawn up for light bulbs with lives of 2,000 hours—double the life adhered to by British makers almost since the start of the century. The federation, representing the makers, such as Thorn and GEC-Osram, will put a draft to the British Standards Institute as soon as possible.

Bulbs with 2,000 hour lives, have started to appear in greater numbers in shops and department stores since the MPs' report. But many are sold at more than double the cost of the conventional bulb.

**The durability and efficiency of filament and discharge lamps, HMSO 40p. Cmnd. 7652.*

Row over EMI's new headquarters

BY MICHAEL CASSELL

THE DECISION by EMI not to occupy its new headquarters which is being built in London's Tottenham Court Road has provoked a major row.

In the face of losses on its medical electronics and music business and its plan to sell off 50 per cent of its music interests to Paramount Pictures of the U.S., the group last month announced that it will not move into the 200,000 sq ft office complex which it sold to Prudential Assurance for £33m earlier this year.

But the move has been attacked by the local MP who has pointed out that EMI's planning permission was subject to one important qualification—that the group should occupy the premises for not less than five years.

Inquiries

Mr. Frank Dobson, Labour MP for Holborn and St. Pancras South, has written to Lord Delfont, chairman of EMI, reminding him that the group's plans were resolutely opposed by Camden Council and many local residents and that, after two public inquiries and a Court of Appeal hearing, Mr. Anthony Crosland, Environment Secretary, at the time, called in the plan and gave it the go ahead on condition that EMI moved in.

Mr. Dobson said: "If this is what EMI intend after all their special pleading, then it makes a mockery of local people, the council, the Environment Secretary, the courts, and above all, of the planning procedure. He has called on Camden to enforce the letter and spirit of the planning permission and has asked EMI how it intends to meet what he describes as its "legal and moral obligations."

Camden points out that the five-year condition laid down by Mr. Crosland was attached to the necessary office development permit which he gave on the site and that, as from August 6 this year, the permit system was scrapped. It accepts, therefore, that the validity of any conditions attached to the permit is in question but is taking further counsel on the matter.

The Department of the Environment says that if there has been a breach of planning permission, even if granted by the Secretary of State, the problem now lies squarely in the hands of the local authority.

EMI acquired the site in 1971 and was unable to start work on it until 1976 because of the planning wrangle. The company said: "It is our clear understanding that the five-year occupation clause will no longer apply.

"Our legal staff have gone into the question very carefully and we were mindful of the five-year clause, when we announced last month that we no longer intended to move in."

Flood warning service to alert City offices

BY PAUL TAYLOR

AN EARLY warning system has been set up by three telex relay companies to alert City subscribers if the Thames threatens to flood.

The three companies, City Teleservices, P. Q. Telesystems and T. R. G. Services, have formed the Flood Warning Group. It will provide clients with at least a three-hour warning should the Thames reach danger level before the Thames Barrier project is completed.

The service, which has the approval of the Greater London Council, will relay a two-line telex warning from the council's flood warning room.

It is estimated that there are about 50,000 companies equipped with telex machines in London, some in the flood danger area. The new service aims to fill a gap in the existing warning system. It will cost subscribers about £100 a year.

At present, a four-hour flood warning is sent out by the GLC to Scotland Yard, which notifies major authorities such as London Transport, hospitals and local councils. The Flood Warning Group will also receive the four-hour warning and pass it on to clients.

The Thames Barrier, part of a major flood defence scheme, is due for completion in December, 1982. Its cost is estimated at £430m.

CONTRACTS

Cossor in £16m radar deal

By Michael Donne, Aerospace Correspondent

COSSOR ELECTRONICS has won a contract worth about £16m to supply the Ministry of Defence with 42 precision approach radar systems for ministry and RAF airfields in the UK and overseas. It is the biggest order the company has received.

The order is part of a ministry programme to update the RAF's airfield equipment.

Recently, Decca Navigator Company won a £3m order for instrument landing systems at RAF airfields at home and overseas.

Cossor Electronics said the new radar, the Type CR 62, would replace an earlier generation which will reach the end of its useful life about 1985.

The equipment will be installed over the next few years at airfields in the UK, West Germany, Cyprus and Gibraltar.

It is primarily intended for high-speed RAF combat aircraft, but will be operable for all other types of NATO aircraft, thereby improving the operational capability of all military aircraft in the alliance.

The latest order will ensure continued employment at Cossor's factories, especially at Harlow, Essex. Mr. Peter Brighton, general manager, said: "This contract represents work for our factory and our people over a five-year period and is, therefore, significant in terms of our future growth plans."

*

RACAL-REDAC has won contracts worth £1.3m for 13 printed circuit board computer-aided design systems. Six orders came from Germany, four from the U.S. and one each from Italy, France and the UK.

*

McCORQUODALE MACHINE SYSTEMS, part of the McCorquodale Group, has won orders worth more than £1m from the Dutch Postgiro organisation for equipment to personalise and encode cheques and transfer documents. It will be delivered in 1980 and 1981 and will replace the existing punched card system.

*

Greenhithe and Swanscombe British Legion Club has awarded a £98,000 contract to S. WERNICK AND SONS, of Billericay, Essex, for an extension to the clubhouse and its facilities.

*

LONGWOOD ENGINEERING COMPANY has been awarded a contract worth over £170,000, by the East Kent Water and Drainage Division of the Southern Water Authority, for improvement to the Broadstairs Sea Outfall Station.

*

TAYLOR INSTRUMENT, Stevenage, Herts., is supplying about £750,000 worth of instrumentation for a chemical fertiliser complex under construction at Alkaim, Iraq. The contract was obtained by Taylor's associate company in Belgium, orders being placed by Sybetra and a number of contractors led and co-ordinated by Sybetra.

هكذا من الأصل

Getting off the energy hook.

"Petrol queues may have disappeared and the availability of oil may appear to be returning to normal, but the energy problem has not gone away. We can no longer count upon stability in international oil supply, and the lesson of the past few months is clear:–


J.M. Raisman. Chief Executive, Shell UK Ltd.

1. The supply/demand margin.
The consuming countries have become hooked on energy and even modest shortfalls in supply can cause severe withdrawal symptoms. At present the margin between supply and demand is too narrow for us to be able to cope with sudden disruptions.

2. A new constraint upon oil production.
There is a major new constraint upon oil production; namely the will of the producing countries to provide oil to meet the consuming countries' demands. From now on we must expect the producers to be guided primarily by their assessment of their own economic needs. These will not always be in tune with ours.

3. Two aims for consumers.
The consuming countries must increase the margin between supply and demand by reducing consumption and strengthening the supply of all forms of energy. Given the will, we in the UK can achieve both of these aims.

4. Oil and gas in the UK.
Although all the large North Sea oil and gas fields may well have been found, there are numerous relatively small accumulations which together with possible finds in other areas of home waters could provide a significant additional reserve.

The Government can encourage the progress of exploration in UK waters by the adoption of a forward-looking licensing policy and by maintaining a climate which will make the producing companies keen to invest.

5. Alternative energy sources.
While oil and gas will continue to dominate the scene for many years to come, coal and nuclear power (already important in the UK) must be allowed to make a greater contribution to the energy mix. The environmental issues surrounding the use of both of these resources must be resolved.

Determined research into other alternatives must continue but however innovative and imaginative the results, they are only likely to be effective contributors towards the end of the century.

6. Improved energy efficiency.
Improved energy efficiency must play a central role in energy policies. A 5% reduction in consumption is within easy reach and up to 30% is possible in the longer term. The more efficient use of energy is a task for the whole community. Government, private individuals, workers in industry and business, particularly those concerned with investment decisions, all can help to ensure that energy is used more wisely.

7. What action can you take?
If you are in business or industry, make an audit of your energy use and adopt (or strengthen) a methodical energy programme. Make sure that one person has overall responsibility for energy management.

As an individual, one of the most rewarding investments you can make is to insulate your roof and/or cavity-walls. It is also worth checking that all your household appliances, from your boiler to your car or motor-mower, are giving you the economy of use you should expect."

Free on request: 'Improved Energy Efficiency', a Shell study of energy problems and some energy efficiency solutions. For your free copy write to Shell UK Ltd., FREEPOST, Cheddar, BS27 3BR.

Energy sense from Shell.

C H Industrials
Progress Report

We make soft tops and sunshine roofs for sports cars like the TR7, decorative trim for consumer products, paints, cement additives, synthetic foam for soft furnishings, and manage industrial property.

In the year to March 1979, our turnover rose 12% to £14,385,832 and we made pretax profits of £624,492.

Although UK trading conditions, and the engineers' dispute in particular, make forecasting difficult, we are optimistic. Sales are so far about 15% ahead of the same period last year, and we expect higher profits in the first half, than the first half of last year.

We are making a capital investment of about £1,600,000 in our businesses.

For a copy of the Report and Accounts for the year ended 31st March, please write to the Secretary, C H Industrials Limited, 28 Lake Street, Leighton Buzzard, Bedfordshire, LU7 8RX.

Hambros Limited

U.S. $25,000,000

7¾% Bonds, 1987

Manufacturers and Traders Trust Company (Formerly First Empire Bank—New York) hereby gives notice that, in accordance with the terms of the above mentioned loan, the redemption of $1,000,000 due on 1st October 1979, has been completed by purchase.

Manufacturers & Traders Trust Company
Principal Paying Agent

September 6, 1979

CHARTER CONSOLIDATED LOAN OF FF.100.000.000 7½% 1972-1987

Redemption due on 1st October 1979: for which a sum of FF.2.000.000 is provided has been entirely made by repurchase on the market. Amount remaining due after October 1st, 1979: FF.86,000,000.

The Fiscal Agent,
BANQUE DE PARIS ET DES PAY-BAS POUR LE GRAND-DUCHE DE LUXEMBOURG.

BUILDING SOCIETY RATES

Every Saturday the Financial Times publishes a table giving details of BUILDING SOCIETY RATES on offer to the public.

For further details please ring 01-248 8000 Ext. 424

Cadbury Schweppes
Limited
Interim Statement

Results for the 24 weeks ended 16 June 1979

	Half year 1979 £m	Half year 1978 £m	Year 1978 £m
GROUP SALES:			
United Kingdom	279.7	253.7	589.3
Europe	43.6	43.9	91.2
North America	50.9	36.4	97.9
Australia	48.3	54.2	105.6
Other Overseas	33.4	58.0	128.7
	455.9	446.2	1,012.7
GROUP TRADING PROFIT:			
United Kingdom	15.5	11.3	32.0
Europe	3.5	3.7	6.2
North America	2.3	(1.0)	3.0
Australia	3.3	3.8	6.5
Other Overseas	2.7	5.8	14.3
	27.3	23.6	62.0
Investment income	1.5	1.3	2.7
	28.8	24.9	64.7
Interest payable	8.6	6.7	17.1
Group *profit before associates*	20.2	18.2	47.6
Share of associated companies' profits less losses	1.5	0.3	0.6
GROUP PROFIT BEFORE TAXATION	21.7	18.5	48.2
Taxation	5.4	5.8	18.5
	16.3	12.7	29.7
Profit attributable to minority interests	0.9	1.4	3.0
GROUP PROFIT	15.4	11.3	26.7
Extraordinary items	0.2	7.0	10.5
Profit attributable to Cadbury Schweppes Limited	15.2	4.3	16.2
Interim Dividend on Ordinary Stock	3.5	3.5	3.5
Final Dividend on Ordinary Stock and Preference Dividend	—	—	9.1
Profit retained	11.7	0.8	3.6
Movements on Reserves			
At beginning of year	160.3	164.1	164.1
Profit retained	11.7	0.8	3.6
Net (loss)/surplus on restatement of currency assets and liabilities	(4.2)	2.5	(2.1)
Goodwill arising on acquisition of Peter Paul Inc.	—	(5.0)	(5.3)
	167.8	162.4	160.3

NOTE Overseas currencies are translated at middle market rates at 16 June 1979.

INTERIM DIVIDEND The Directors have declared an Interim Dividend of 0.95p on the Ordinary Stock in line with last year. The Dividend will be paid on 2 January 1980 to stockholders on the Register of Members at the close of business on 19 November 1979.

Statement by Sir Adrian Cadbury, Chairman

Results for the half year were satisfactory and closely in line with expectations. Group Profit before taxation at £21.7m showed an increase of 17.3% over the first *half of 1978.*

Detailed comparison between the two half years is affected by alterations in the composition of the Group, i.e. the inclusion of a full half year's results of Peter Paul compared with only seven weeks' in 1978 and the change from subsidiary to associate status of the Nigerian and Indian companies. The net effect of these and other lesser structural changes is not material in relation to Group Profit before taxation.

Comparison of the sterling results is also affected by movements in exchange rates. Had exchange rates remained at their 17 June 1978 level the reported Group Profit before taxation would have been approximately £1 million higher.

In the United Kingdom there was good progress in all divisions with swift recovery from the effects of the road haulage dispute in January. Exports, however, *suffered a set-back as a result of that dispute and it* will not be possible to recoup lost sales this year.

In the USA progress has been good in both confectionery and drinks, and the Peter Paul acquisition is bringing all the benefits which were forecast. In Canada confectionery production has been concentrated at the Ontario factory but commissioning *difficulties have continued into the second half and* will affect confectionery profits.

Trading conditions in Australia continued to be highly competitive but there was some recovery in the company's results with a growth in sales and profits in terms of local currency. Difficult industrial and economic conditions are, however, expected to persist and the company will find it difficult to reach its budgeted improvement in confectionery for the year.

In summary, overall progress has been in line with our objectives. In particular we increased trading margins and marketing expenditure expressed as a percentage of sales. Furthermore, our working capital and fixed assets were more economically deployed thus improving the return on our operating assets.

The full year should show a material improvement in Group Profit over 1978 although the published figures could be significantly affected by the ex*change value of sterling on 29 December.*

6 September 1979.

Copies of the above Statement will be sent to all stockholders and further copies are available from the Secretary. Cadbury Schweppes Limited, 1-10 Connaught Place, London W2 2EX.

This announcement appears as a matter of record only.

Banque de l'Indochine et de Suez

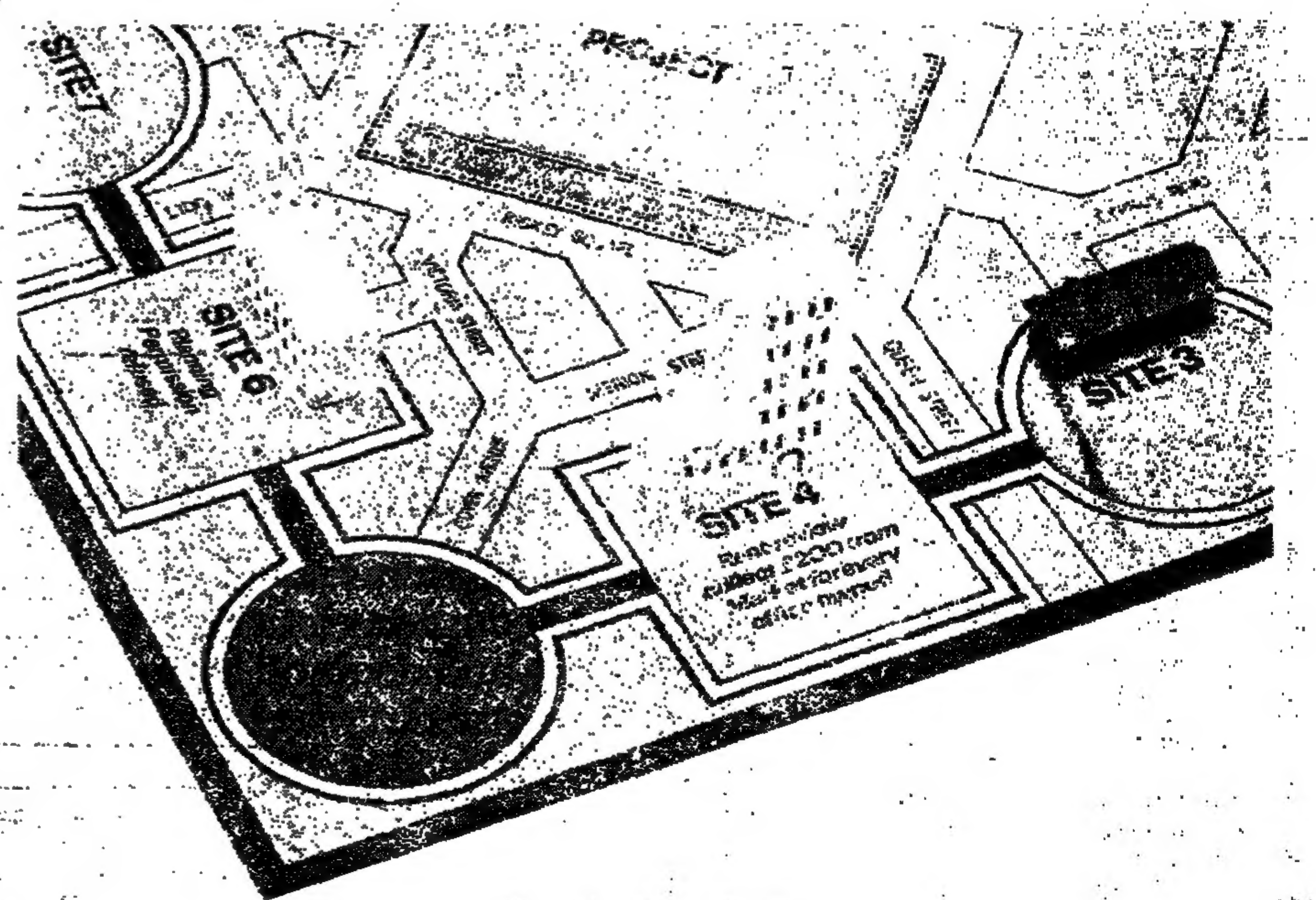
U.S. $40,000,000

FLOATING RATE NOTES DUE 1989

Banque de l'Indochine et de Suez
Bankers Trust International Limited
Blyth Eastman Dillon & Co. International Limited
Crédit Industriel et Commercial
Credit Suisse First Boston Limited
European Banking Company Limited
First Chicago Limited
Kredietbank International Group
Morgan Grenfell & Co. Limited
Morgan Stanley International Limited

Abu Dhabi Investment Company — Algemene Bank Nederland N.V. — American Express Bank International Group
Amsterdam-Rotterdam Bank N.V. — Andelsbanken A/S Danebank — Arab Financial Consultants Company S.A.K.
Banca Commerciale Italiana — Bank of America International Limited — Bank Gutzwiller, Kurz, Bungener (Overseas) Limited
The Bank of Tokyo (Holland) N.V. — Banque Arabe et Internationale d'Investissement (B.A.I.I.) — Banque Bruxelles Lambert S.A.
Banque Française du Commerce Extérieur — Banque Générale du Luxembourg S.A. — Banque Internationale à Luxembourg S.A.
Banque Louis-Dreyfus — Banque Nationale de Paris — Banque de Paris et des Pays-Bas — Banque Rothschild
Banque de l'Union Européenne — Banque Worms — Barclays Bank International Limited
Berliner Handels-und Frankfurter Bank — Caisse des Dépôts et Consignations — Caisse Nationale du Crédit Agricole
Centrale Rabobank — Chase Manhattan Limited — Chemical Bank International Group — CIBC Limited
Citicorp International Group — Commerzbank Aktiengesellschaft — Continental Illinois Limited
County Bank Limited — Crédit Commercial de France — Crédit Lyonnais — Crédit du Nord — Creditanstalt-Bankverein
Daiwa Europe N.V. — Den Norske Creditbank — The Development Bank of Singapore Limited
DG BANK Deutsche Genossenschaftsbank — Dillon, Read Overseas Corporation — Dresdner Bank Aktiengesellschaft
Euromobiliare S.p.A. — Fuji International Finance Limited — Genossenschaftliche Zentralbank A.G. Vienna
Girozentrale und Bank der Osterreichischen Sparkassen Aktiengesellschaft — Goldman Sachs International Corp.
Gulf Riyad Bank E.C. — Hambros Bank Limited — Hedderwick Stirling Grumbar & Co. — Hill Samuel & Co. Limited
IBJ International Limited — Istituto Bancario San Paolo di Torino — Jardine Fleming & Company Limited
Kansallis-Osake-Pankki — Kidder, Peabody International Limited — Kleinwort, Benson Limited
Kuhn Loeb Lehman Brothers International — Kuwait Foreign Trading Contracting & Investment Co. S.A.K.
Kuwait International Investment Co. S.A.K. — Landesbank Rheinland-Pfalz und Saar International S.A. — Lazard Frères et Cie
McLeod Young Weir International Limited — Lloyds Bank International Limited — LTCB Asia Limited
Manufacturers Hanover Limited — Merrill Lynch International & Co. — Mitsubishi Bank (Europe) S.A.
Mitsubishi International Finance — Samuel Montagu & Co. Limited — Morgan Guaranty Ltd — Morgan Guaranty Pacific Limited
National Bank of Abu Dhabi — The National Bank of Kuwait S.A.K. — Nederlandsche Middenstandsbank N.V.
Nesbitt, Thomson Limited — The Nikko Securities Co., (Europe) Ltd — Nippon European Bank S.A.
Nomura Europe N.V. — Nordfinanz-Bank Zurich — Nordic Bank Limited — Orion Bank Limited
Osterreichische Länderbank AG — Phillips & Drew — Postipankki — Salomon Brothers International
Sanwa Bank (Underwriters) Limited — J. Henry Schroder Wagg & Co. Limited — Skandinaviska Enskilda Banken
Smith Barney, Harris Upham & Co. Incorporated — Société Générale — Société Générale Alsacienne de Banque
Société Générale de Banque S.A. — Sparbankernas Bank — Sumitomo Trust Finance (H.K.) Limited
Svenska Handelsbanken — Trade Development Bank — Vereins-und Westbank Aktiengesellschaft
S.G. Warburg & Co. Ltd. — Wardley Limited — Westdeutsche Landesbank Girozentrale
Dean Witter Reynolds International — Wood Gundy Limited — Yamaichi International (Nederland) N.V.

June 1979.



Safer than houses

	1979	1978	
Turnover	£15,362,000	£10,483,000	+47%
Profit before tax	£760,000	£449,000	+69%
Earnings per share	17.30p	13.97p	+24%
Assets per share	152p	139p	+ 9%
Dividends	16%	11.9%	+34%

Last year's results from Crouch Group demonstrate a simple fact. It is better to be a commercial and industrial property development and investment company than just a house builder.

The 1979 turnover, profit, earnings, assets and dividends are all up as a result of a policy decision we quietly announced two years ago.

Then, Crouch was almost wholly a residential developer and builder, a business it has now been in for 50 years.

But eighteen months ago, we decided to extend the Group's business into the commercial and industrial fields as well and that is where the emphasis of the Group is rapidly moving.

Now the first fruits of that decision can be seen.

It's why we feel the future is bright and look forward to another successful year.

Because we feel our business is now safer than just houses.

Our 1978 Annual Report and Accounts spells out our policy and gives the full details of last year's development. If you would like a copy, write to: The Secretary, Crouch Group Limited, Sutherland House, Surbiton Crescent, Kingston-upon-Thames, Surrey.

Crouch Group Limited

UK NEWS—LABOUR

Bid to end deadlock at Chrysler Ryton today

BY ARTHUR SMITH, MIDLANDS CORRESPONDENT

RENEWED EFFORTS to break the deadlock in the 10-week strike by 2,000 workers at Chrysler UK's Ryton plant, Coventry, will be made today.

After intervention by the Advisory, Conciliation and Arbitration Service, management and union leaders have agreed to hold further talks, but there is little hope of progress.

Meanwhile, there is no sign of any weakening of the strike by 3,100 workers at the nearby Stoke engine plant who also walked out in protest at the company's offer of a 5 per cent pay award.

Standstill

More than 1500 workers attended a meeting in Coventry on Friday to give overwhelming support to the shop stewards' recommendation for continued action. The Stoke stewards, who are opposed to central negotiations, have disassociated themselves from the management talks with the Ryton union officials.

The strike at Stoke, which supplies components for assembly of the Sunbeam and Avenger models at Linwood, Scotland, has brought all Chrysler car production to a standstill.

Chrysler UK, now owned by PSA Peugeot Citroen, has replied to the Coventry unions' 20 per cent pay claim with an offer of 5 per cent, plus the prospect of additional earnings through a self-financing incentive scheme.

ITV talks resume today

By Our Labour Correspondent

TALKS TO find a solution to the month-long dispute which has blacked out independent television programmes resume in London today.

Full negotiating teams from the employers' side and the three unions involved will attend the meeting at the London offices of the Advisory, Conciliation and Arbitration Service.

Hopes of a settlement increased slightly after a 3½-hour session at ACAS on Friday, but there is likely to be a lot of difficult negotiating before transmissions resume. Even if the talks succeed it may be some time before independent television is back on the air.

The ITV companies have offered pay increases of 15 per cent in response to a 25 per cent pay claim.

Peace formula for Kellogs

THE 1,200 members of the union of Shop, Distributive and Allied Workers, who have been in dispute with Kellogs since July, voted overwhelmingly at a meeting in Manchester yesterday to accept a new pay formula which was reached during the TUC conference at Blackpool.

The union said the new settlement would add £8.50 to basic rates. Most production workers are on shift work, which means they will earn an extra £1.36 to £4.97 on top of the £8.50.

Energy plan for docks company

THE MERSEY Docks and Harbour Company has set up a committee of management and shop stewards to cut its £3m annual energy bill by 10 per cent.

An initial campaign aims to save £100,000 on the company's electricity bill, expected to reach £1.8m this year.

Action by industrial civil servants starts

BY ALAN PIKE, LABOUR CORRESPONDENT

INDUSTRIAL civil servants will today begin a programme of selective strike action which threatens serious disruption for the RAF and other Government services.

Unions representing the 166,000 industrial civil servants are in dispute over the proposed staging of a pay offer worth 22-30 per cent. The Government is proposing phased introduction of the awards—recommended by an independent study—with 9 per cent plus £1 backdated to July, another 5 per cent in November and the rest next April. Union negotiators had hoped for full payment from July and are pressing for improvements in the Government's proposed phasing.

RAF and Army aircraft refuelling staff, crane drivers and lockgate operators at four Naval dockyards, prison maintenance staff and lift engineers at Government departments in London are among the groups who have been told to join the strike from today.

Industrial civil servants not involved in strike action will stage other sanctions including an overtime ban.

Prototype bicycle plan by Dunlop unions

BY GARETH GRIFFITHS

TRADE UNIONS at the Dunlop plant at Speke, Liverpool have suggested it should switch production to a new type of bicycle which they say could provide employment for more than 1,000 people.

The suggestion is contained in a report drawn up by the union side of a joint company working party which has been looking at the possibilities of alternative products for the plant which closed earlier this year.

There are strong indications that Dunlop will reject the proposals at the next meeting of the working party early in October. Dunlop said it regarded the union document as a confidential matter but union officials believe the company will veto its suggestions.

The 18 unions involved want Dunlop to test out a prototype of the bicycle which converts into a tricycle. Shop stewards said the bikes could be produced rapidly and at a small cost. The work would be labour-intensive and semi-skilled and would suit the workforce on Merseyside.

Other suggestions in the report include producing an oil centrifuge development for cleaning oil in motor vehicles, recycling rubber products, buoyancy devices and a range of medical products. The unions have not costed the suggestions and want the company to investigate market potential.

Naval hardware exhibition opens

MORE THAN 200 companies are taking part in the Royal Navy Equipment Exhibition, which opens at HMS Excellent, Whale Island, Portsmouth, today. It continues until Friday.

The exhibition aims to stimulate business with overseas navies and demonstrate equipment provided for the UK armed forces.

EEC worker directors rejected

BY PHILIP RAWSTORNE

EUROPEAN COMMISSION proposals for the appointment of worker directors to company boards have been rejected by the European Parliament's legal affairs committee.

British Conservatives combined with Christian Democrats and Liberals on the committee to throw out the proposals by 13 botes to nine.

The Commission's plans for introducing throughout the Community the German type of two-tier company boards with equal representation of workers and management will now be deferred for further consideration.

The issue was due to be debated and voted on at the full session of the Parliament in Strasbourg later this month.

The debate had already been postponed for four months after opposition from the British Conservative group in the previous appointed Parliament.

The Conservative members of the committee said: "It is vital that whatever City proposals ar that whatever Community proposals are made for company organisation throughout the Community shall represent a fair compromise of the essential features acceptable in the member states and should not blindly follow the German form of company organisation."

Further blow

They added that close co-operation between the centre-Right parties had administered a significant rebuff to the Community's unquestioning acceptance of the German system and to attempts by the Left to use the Community to promote socialist policies.

John Eliott writes: The committee's decision is a further blow for the Commission which has been trying for at least seven years to produce a directive harmonising company law in EEC countries. This is separate from other proposals for a Euro-company statute.

Drafts of the directive have proposed the introduction of worker directors on the top level of a t wo-tier board structure although in recent years a more flexible approach has been proposed because of opposion from some countries.

The Bullock Report on worker directors in the UK, published early in 1977, was prepared partly in response to the need for Britain to develop a policy that would take account of EEC developments.

The slow progress on the directive, and the fact that there would be a lengthy transitional period before any proposals became compulsory, means however that no major changes in company structures are likely for some years.

Strike will hit 200 trains today

RAIL services to and from Liverpool Street station, London, will be "seriously disrupted" today by a 24-hour token strike by British Rail guards. Two hundred trains are likely to be cancelled.

The strike called after a guard was assaulted on a Shenfield-to-Liverpool Street train three weeks ago.

Building and Civil Engineering

£12m awards to Laing

THE FIRST phase of the redevelopment of Mayday hospital *in the London Borough of* Croydon is to be carried out over the next three years under a contract worth about £8.8m awarded to John Laing Construction by the South West Thames Regional Health Authority. This is the largest of over £12m-worth of contracts just announced by Laing.

Work is to start soon on the Mayday hospital project where a mainly three-storey block and an associated service block separated by an enclosed hospital "street" will be built and linked to the main hospital complex by a bridge.

The new buildings will include acute wards, an operating theatre suite, an intensive therapy unit, adult day care unit, endoscopy treatment unit, staff and administration rooms, storerooms, kitchens, dining rooms and a *telephone* exchange. These will provide a total of about 167,000 sq ft (15,500 sq metres) of accommodation.

Construction will be of reinforced concrete frame on piled foundations with cavity wall cladding of white concrete facing blocks and insulating block inner leaf. At the upper level, cladding will be of insulated aluminium-faced panels. Plant rooms will be at roof-top level and roofing will be of insulated steel panels or concrete.

Completion of phase one is due by early 1983. Architects are the Percy Thomas Partnership. Consulting engineers are Alan Marshall and Partners (structural) and Troup Bywaters and Anders (mechanical and electrical). Quantity surveyors are J. B. Marks and Partners.

In Yorkshire, Laing says it is to build homes for more than 300 people in Bradford and Bingley under two contracts together worth £2m, awarded by the City of Bradford Metropolitan Council. Both are due for completion in under two years.

The larger project involves the construction of 50 flats, 21 houses and a community block *in Chatham Street and Otley* Road, Bradford. The flats, all one-bedroom, are designed for the elderly and are being built in two-storey blocks. Houses will have two or three bedrooms.

The second contract, at Ash Terrace, Bingley, involves 59 one-bedroom flatlets for elderly people, two three-bedroom flats for a warden and deputy warden and communal areas. Flatlets will be of traditional construction with piled foundations, brickwork external walls, blockwork internal partitions and pitched tiled roofs.

A third contract for Laing is worth £1.6m and is for a four-*storey office block in the centre* of Redditch, West Midlands, for Grosvenor Estate Commercial Developments.

The block will form Phase 2 of the Prospect Hill development and will provide a gross floor area of about 54,000 sq ft (5,000 sq metres) in open plan offices. Work has just started, with completion due by November next year.

Construction is of reinforced concrete frame on in situ bored pile foundations. Cladding will be of facing brickwork and double glazed anodised aluminium windows.

Architects for the scheme are Edmund Kirby and Sons. Consulting engineers (structural) *are Deakin Callard and Partners* and V. Lawson Associates (mechanical and electrical). Quantity surveyors are L. C. Wakeman and Partners.

Busy time for Crown House

UNUSUAL for Crown House Engineering is a £931,402 slaughter house contract at Gorgie for the City of Edinburgh District Council. The company's task here will be the supply and installation of process services.

This is the largest of several awards to Crown House totalling over £4.7m. Work starts early next year with completion due late in 1981.

Among the other contracts is a £745,000 award for air conditioning, heating, fire and other services for an eight-storey office block in Fetter Lane, London, EC4 for British Steel Pension *Fund Nominees. Michael Lyell* Associates are the architects and Bernard Sunley the main contractor.

Other work for Crown House Engineering includes the supply and installation of mechanical electrical sprinkler and other services for English Numbering Machines' new factory at Brunswick Park Industrial Estate, New Southgate, London (£453,000), and the installation *of boiler plant* at the RAC Club Pall Mall, London.

Also to be added to the latest awards are two contracts for Amaford Properties—one for the installation of lighting, power supplies and fire alarms (£167,622) and the other for heating, hot and cold water services, sanitary installations, ventilation and fire services (£371,000). Both jobs are on the same site—a seven-storey office development in Albert Square, Manchester.

Two further contracts are for the Property Services Agency at Bovington Camp (£964,456) *for* services, process tanks, overhead travelling cranes and lifts and at the Redditch Skill Centre, *Moons Moat*, East Redditch, for power and lighting, while for GEC Electrical Projects at Boughton Road, Rugby, the company has two separate contracts, one covering electrical services and fire alarms (£108,004) and the other air conditioning and water heating.

BP devises a floating platform

BRITISH PETROLEUM has developed a floating oil production system which can be used for exploiting fields in deep water.

The system, for which British Shipbuilders is a licensee, includes a semi-submersible floating platform moored to the seabed with vertical tethers. Unlike the large fixed steel or concrete platforms which were used in the development of most of the early North Sea oil fields, this floating unit can be constructed in any shipyard.

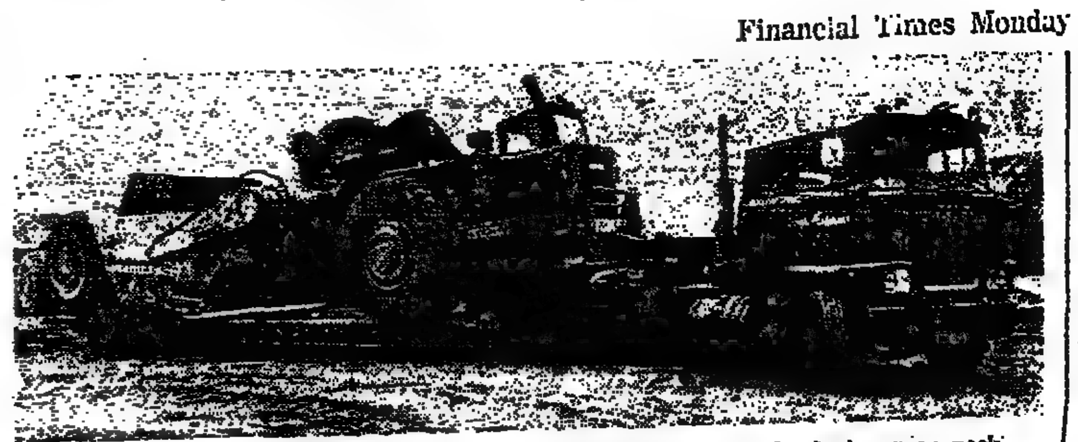
BP said that the system — known as a *Tethered Buoyant* Platform (TBP) — would be suitable for exploiting oil fields in water depths from 150 to 600 metres. *It would also be a suitable* base from which to exploit small, commercially marginal fields.

The TBP has been under joint development by BP and Vickers Offshore (now British Shipbuilders) since 1975. Preliminary work was partly supported by loan funding from the European Economic Community and the Department of Energy.

As designed, the floating platform would be positioned above the offshore field and linked to seabed well systems by riser pipes. The wellhead system, positioned on the seabed, would be installed and maintained without the need for divers, BP said.

The system permitted the various aspects of field development to proceed simultaneously, the company added. While the platform was being constructed wells could be drilled, subsea well units installed and the seabed anchorages fabricated and placed. "This reduced construction time makes a significant contribution to the relative economic advantage of the TBP system," BP stated.

It is known that several offshore operators—including BP—have been considering such a system for the exploitation of some of the new North Sea *fields. Conoco and its partners* in the Hutton Field are expected to use some sort of tethered, floating unit, for instance.



This is the latest low loader to be designed by Craven Tasker of Andover, Hants, for carrying large construction equipment such as the motor scrapers shown on board here. The trailer, which has a gross weight of 66 tonnes, has a gentle sloping swan neck. This enables the noses of most large scrapers to clear the neck and *thus avoid any need* to use blocks.

Three contracts for Jarvis

CONTRACTS worth £2.3m have been awarded to Jarvis.

In London, premises in Eccleston Place, S.W.1, are being modernised and extended to form the Westminster District *Office of the London* Electricity Board, while in Greenwich, S.E.18, a link bridge between existing blocks is being constructed at the Brook General Hospital. Consulting engineers for the latter is R. T. James and Partners.

In the Newcastle upon Tyne area an automatic telephone exchange is being doubled in size to the design of the Property Services Agency. At Seaham, Co Durham, club buildings and a concert hall are being constructed for the Dawdon Working Men's Club. Clarance Solomon Associates is the architect.

A warehouse built in 1830 as part of the Liverpool Road Station, in Manchester is being restored by Jarvis. This is the first phase in the restoration of the station by the Greater Manchester Council in preparation for the Great Railway Exposition in August 1980 to commemorate the 150th anniversary of the opening of the Liverpool and Manchester Railway. The *station will eventually become* the new home of the North Western Museum of Science and Industry.

At Wigan Jarvis has started alterations to a large factory in Hindley Green for Ward and Goldstone. Hately, Winterbottom, Thorn is the architect.

Bovis gets £3m award

TESCO STORES has awarded Bovis Construction a £3.1m contract, for the construction of a four-level store at Newland Street, High Wycombe, Bucks. Completion is due in November, 1980.

The store on a site adjoining the bus station will provide more than 51,000 square feet of sales space on ground and first floors, plus parking for up to 225 cars at second and third floor levels. These parking facilities will be linked to an existing multi-storey car park by pre-cast pedestrian and vehicular bridges.

Designed by Inskip and Wilczynski, the development will also include a public restaurant, in-store bakery, offices, storage, refrigerated areas and ancillary plant rooms.

The structure will be erected on piled foundations and will consist of a reinforced concrete frame with brick facings and pre-cast concrete sections.

The quantity surveyors are Spicer Partnership and Structural Engineers are Hubbard and Sheehy.

Caribbean platform yard

A NEW platform fabrication and shipbuilding yard has been opened in the Caribbean island of Aruba in the Netherlands *Antilles by Dupont Fabrications* Aruba NV.

On a 60-acre site, the yard leads into a 36 ft deep water basin and is stated to have a capacity for jackets and modules of 20,000 tons or more.

The company hopes to get large orders *from* the oil industry in the Gulf of Mexico and in South America and says it may be able to announce the award of a major contract within the next two months.

It is stated that the company is "backed by a consortium of Europe-based businessmen" and that a budget of U.S.$5m for preparatory work on the site and for marketing has been allotted.

Drainage for the Navy

SURFACE WATER and foul drainage, sanitary installations and external connections to sewers are to be designed by Balfours for the Navy's shore base HMS Collingwood near Fareham, Hants.

This firm of consulting engineers has been commissioned to undertake the task by the Property Services Agency. A modernisation programme is under way at HMS Collingwood and Balfours' task is in connection with rebuilding in the training area.

Three jobs for Henry Boot

CONTRACTS worth over £1.5m have been won in Scotland by Henry Boot Construction.

In High Street, Dumfries, the company is demolishing and reconstructing three-storey shops and offices for Greenhalc Developments at a cost of £670,000 while at East Machan, Lanarkshire, it is carrying out housing repairs for Hamilton District Council. Value of this contract is £665,000.

A third contract, worth £220,000, is for alterations at St. Peters College, Glasgow.

Homes in Birkenhead

FIVE HOUSES, 47 bungalows and 12 single-bedroom flats are to be built in Banning Street, Birkenhead, by Mears Contractors.

Awarded by the Metropolitan Borough of Wirral, the contract is worth over £850,000. The work is expected to take about 15 months to complete.

Store to be extended

EXTENSION OF a Littlewoods store in Harlow, Essex, is to be undertaken by Higgs and Hill Building.

The contract worth £½m, involves construction *of a* concrete-encased steel frame second storey to house new offices and administration *facilities*.

On completion, existing offices on the first floor are to be removed and the area refurbished to create new staff and preparation areas to serve the enlarged store.

Heat loss reduced

VERY SMALL inection moulded plastics blocks which act as "thermal breaks" in aluminium extrusions used in curtain walling installations are now being used by Crittall Construction (Norcros Group).

The company says that due to their high thermal conductivity the aluminium extrusions can account for 50 per cent of a wall's heat loss but that the heat flow through the extrusion can be reduced by a factor of four when the thermal break devices are used.

In the method now adopted by Crittall, extrusions are split in half longitudinally and then connected with the wedges. The latter are made by another Norcros company, Cego (Engineering), of Halfords Lane, Smethwick, Warley, West Midlands (021 558 2191). Connecting up of the aluminium extrusions with the plastics blocks is *carried out with the aid of a* purpose-made press.

Lifting the land

A MASSIVE operation to "lift" the Deeside Industrial Park at Shotton by more than 3 ft to prepare land for more factories has been started by the Welsh Development Agency.

Nearly 2m tons of sand are being pumped a distance of two miles to raise about 300 acres of low-lying ground to *provide the correct fall* for drains and sewers for additional factories.

The WDA has awarded a £1m contract for the work to Wimpey.

Riverside sports centre

BUILDING OF a £957,000 sports centre at Farnham, Surrey, for *Waverley District Council is to* be undertaken by Southern Counties Construction.

The company will also carry out road diversion work for the council in the town centre and build an access road to the new sports centre at a cost of £268,500.

The sports complex, alongside the River Wey, is to include two swimming pools, six squash courts, a sports hall, lounges, training and changing rooms, a bar, plant rooms and administration offices. It will take 18 months to build and will involve Southern Counties in vibro-compaction soil stabilisation under the foundations and the pools.

Diversion of East Street, the A325, will involve construction of a 600 metre length of single carriageway and associated drainage, services and brick boundary walls.

IN BRIEF

- Partners Construction has won a £445,000 contract for the construction of a health centre for Sefton Area Health Authority.
- Over 80,000 lineal metres of joints in concrete bunds surrounding oil storage tanks at Sullom Voe are being sealed with Nitoseal PX 220, a pitch polyurethane sealant manufactured by CBP (UK), a Fosroc Construction Chemicals company in the Foseco Minsep Group.
- In association with the Royal Institute of British Architects and the Sports Council, The Concrete Society has arranged a symposium "Facilities for leisure: Sport." It will be held on October 25 at the Hyde Park Hotel, London. Details from Julia Headley-Neill, The Concrete Society, Terminal House, Grosvenor Gardens, London SW1W 0AJ (01-730 8252.)
- All the building products of the TWIL Group, which produce wire and wire-related products, are now being marketed by one division called Tinsley Building Products. Companies brought together into this new grouping are Omnia Concrete Floors, and Grant-K-Lath. Tinsley Building Products will also promote the TK Housing System.
- Fugro has been appointed geotechnical consultant for the Morecambe gas field in the Irish Sea by Hydrocarbons Great Britain, a British Gas Corporation subsidiary.
- Lesser Building Systems has won a £130,000 contract from the Property Services Agency, for a 500 square metre building at the Tropical Products Institute, Slough, Berks.
- Andrews-Weatherfoil is to provide all the building services for an extension to Dingles *department store, Queens Road*, Clifton, Bristol.
- Fairclough Building has been awarded a £550,000 contract by the Greater London Council for the construction of the Eglington Infants and Nursery School at Greenwich.
- Southern Counties Construction is to build a £120,000 factory and office unit at Reading for Laverstoke Property Company.
- Yorkshire Water Authority, Eastern Division, has awarded a £60,790 contract to William Birch and Sons, of York, for completion of extensions to the sewage works at Bubwith.
- Dimsdale Developments (South East) has awarded a £470,000 contract to W. S. Try for the restoration and extension of Picton House, High Street, Kingston-upon-Thames, Surrey.

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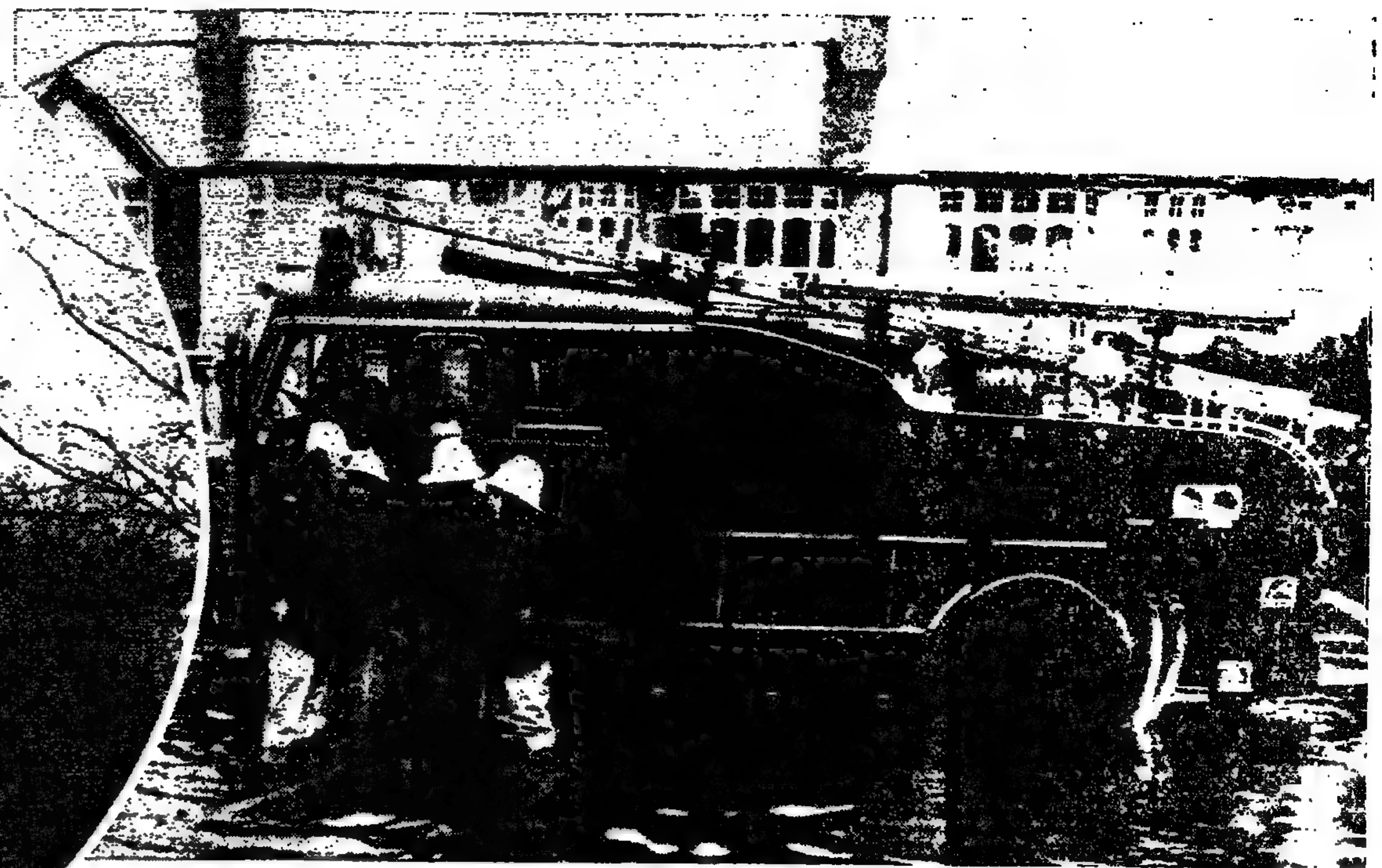
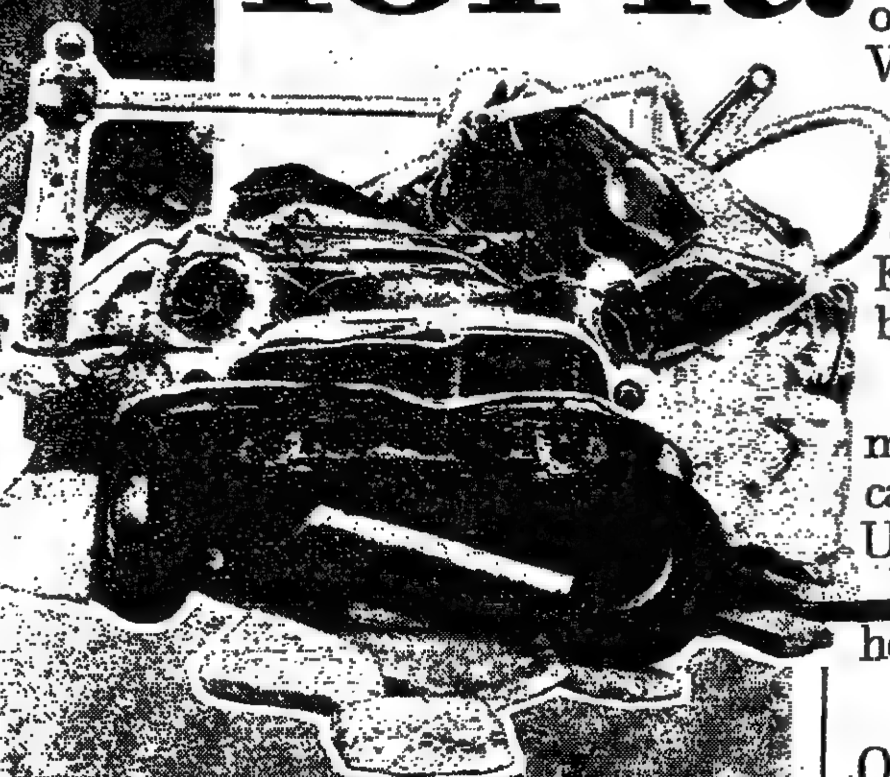
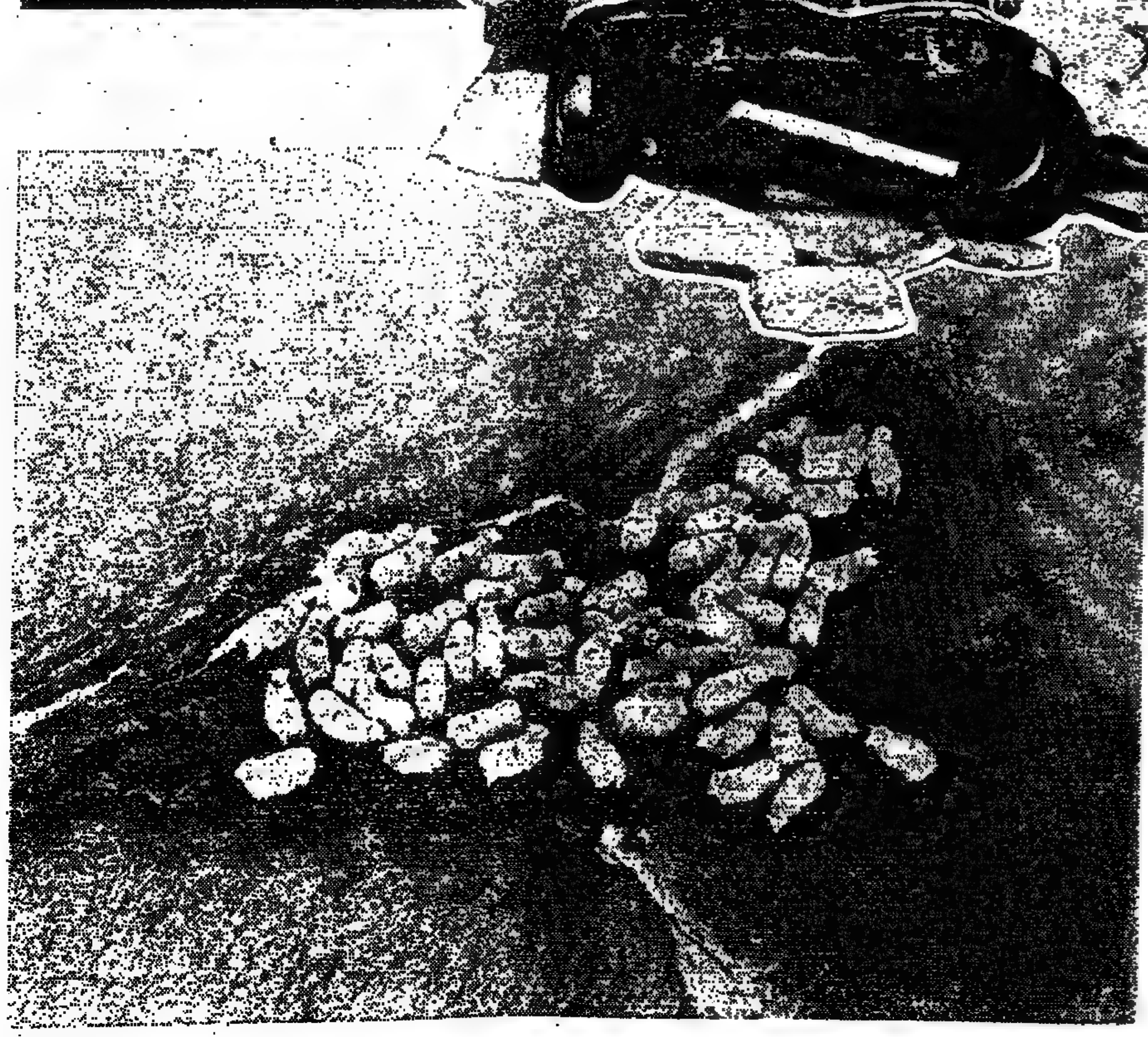


While others were assessing the damage, we were paying for it.





On the morning of January 11th 1978, you might have been forgiven for mistaking the streets of Sheerness for Amsterdam or Venice.

After a night of near hurricane force winds and waves as high as houses, the East Kent coastline was, quite simply, blown to bits.

In the light of this thirty mile trail of devastation, it became clear to us at Commercial Union that there was only one way we could be of real help.

Not with tea and sympathy. Or vague promises of compensation.

But rather, by agreeing to claims immediately. On the spot.

Now, it's not every day you'll find us popping in on policy holders, with a view to popping a cheque in the post.

After all, like any other insurance company, every claim we deal with involves certain formalities.

There are details to be noted down. Policies to be checked out. Assessments to be made. And so on.

A process that can take anything from five minutes to five months. Or even longer.

Speaking for ourselves, we prefer to simplify the paperwork, for the sake of a speedy settlement.

Which is precisely how we coped with the mopping up of East Kent.

On January 12th, with the storm damage barely a day old, we set up an emergency claims centre in Canterbury.

Within two working days we had our own team of claims inspectors out and about on the waterways, personally totting up the cost of repairs.

In all, we paid out £115,000 from just one branch, to more than 400 policy holders.

So they could start rebuilding their lives, while others were still getting estimates.

CU ASSURANCE

We won't make a drama out of a crisis.

Technical Page

EDITED BY ARTHUR BENNETT AND TED SCHOETERS

● PROCESSING

Cleans up circuit board holes

ONE OF the more irksome tasks in multilayer printed circuit board production is the removal of "smear" from the drilled holes which is vital if plating through (plating the curved surface of the hole) so as to interconnect the layers as desired, is to be carried out successfully.

The smear is an organic substance which arises as the drills move through the epoxy which bonds the laminations, and removal usually involves several stages including acid treatment to convert the smear to loose residue, washing away the residue and neutralisation of any residual acid in an alkaline bath.

A process is about to be launched in the UK in which the smear can be removed in one operation lasting about 12 minutes and involving no wet stages at all.

The plant involved is known as Dionex Series 4000, is made by International Plasma Corporation and is to be marketed in the UK by Circuit Plating Equipment, Buckhurst Hill, Ascot, Berks (0990 25049).

Plasma de-smearing is the name of the technique and it consists essentially of placing the boards in a vacuum and subjecting them to a plasma discharge at low temperatures which has the effect of oxidising the smear materials to gases which are pumped off. The boards are then completely ready for plating.

In its larger version, the equipment consists of a vacuum chamber which is cylindrical in shape and measures 45 inches in diameter by 36 inches long, a radio frequency generator of 4 kW power which feeds plasma-forming screens in the cylinder, rack mounting in the cylinder for up to 16 boards measuring up to 24 x 18 inches, and suitable vacuum pumping equipment.

Versions are available with vacuum cylinder diameter of 24 inches and if slower processing is acceptable a 1500 watt rf generator can be fitted. A supply of industrial oxygen and Freon is needed for the plasma reactive gas.

Operation is entirely automatic: once the operator has shut the chamber door after loading the boards the system pumps down, starts the plasma and indicates completion.

The U.S. maker of the machine claims that plasma de-smearing is cheaper than any wet process, although the equipment in its larger version costs about £35,000.

The cost saving occurs, claims the company, because there is no need for arrangements to store dangerous chemicals or deal with toxic fumes and chemical waste from the baths, no problems of change of chemicals when the board type changes and nothing to corrode or wear out. The process is clean and quick, but above all has the advantage that there is no danger of leaving chemicals behind in the boards: according to the maker this is one of the major cost factors in the long term because short circuits can eventually appear, possibly after the board has left the manufacturer.

GEOFFREY CHARLISH

● LUBRICATION

Aids smooth operation

OILS SPECIALLY formulated for use on machine slideways and claimed to overcome the problems associated with slow movement and intermittent use of machine tool carriages are being marketed under the brand name Scimitar by Filtrate Oils, PO Box 67, Filtrate Works, Kidacre Street, Leeds LS1 1LS. (0532 450773).

One of the major problems the lubricant is claimed to overcome is judder, which can affect the finish of the workpiece and shorten tool life.

Three grades of the lubricant are offered and one of them is formulated for use where the slideways oil must double as the hydraulic fluid. An additive, common to all three types of oil, prevents water-soluble cutting fluids from washing the oil film off the machine bed, it is stated.

Glass fibre rotor blades for British Airways' Chinook helicopters take shape at Boeing Vertols' Philadelphia plant in the U.S. Glass fibre blades are said to give a 9 per cent fuel saving, and 6 per cent increased pay load. Reductions in noise and maintenance are also among the claimed advantages. British Airways will use three twin-rotor Chinook helicopters to carry passengers and cargo between the mainland and the North Sea oil rigs.

● COMMUNICATIONS

Radio link for video monitoring

WHERE CLOSED circuit television is needed but distance or terrain problems preclude the use of cables, a newly designed radio link for television signals from Microwave Associates can provide the solution.

Operating in the 1 to 2 GHz band (L-band) the link uses amplitude modulation and operates at both ends from a 24 volt supply. The transmitter can accept modulating video signals at one volt peak to peak direct from a low cost monochrome television camera and consists of modulator, driver and an optional final amplifier.

For short range applications the driver can be directly coupled to the modulator giving about 2.5 watts to the aerial. However, longer ranges can be produced using the amplifier, when the power is raised to 9.5 watts (peak emitted power).

At the receiving end a frequency down-converter provides a uhf signal suitable for direct connection to a conventional domestic television set.

The local oscillator works above the received frequency and is tunable over a 100 HMz band, giving the freedom to select a convenient reception channel in the uhf television band. The noise figure for the conversion is claimed to be better than 3.5 dB.

The link is particularly suitable for mobile or remote surveillance in industry, security and in traffic control. In conjunction with a suitable standards converter it can also be used for transmission of airfield radar display patterns to vehicles. Data transmission is also a feasible application.

More from Microwave Associates, Dunstable LU5 4SX (0582 601441).

● INSTRUMENTS

Good view of waveform

LATEST DUAL channel oscilloscope from Tektronix allows the user to see either or both channels, their differential and the external trigger at the same time.

Using high performance digital circuits, the model 465B has a 2ns maximum magnified sweep and makes use of low noise integrated circuits in the vertical amplifiers together with light emitting diode lamps for all front-panel indicator lights.

It has all the proven features of the widely used Tektronix 465 oscilloscope, such as 100MHz bandwidth at 5mV/div sensitivity, dual trace, delayed sweep, and a sharp, bright 100 x 80 mm cathode ray tube.

If desired, the operator can look at both the A sweep and the B sweep simultaneously without the necessity to switch back and forth between modes or reposition a mixed sweep display.

For greater ease in examining fast risetime waveforms, a two nanseconds per division maximum sweep speed is provided: invaluable in examining fast risetime signals like clock pulse edges which are so crucial in digital systems service and maintenance.

More from the company at Beaverton House, P.O. Box 69, Harpenden, Herts (05827 63141).

● MATERIALS

Source of finned tube

APPOINTMENT as exclusive distributor in the UK for extended surface titanium tubing produced by High Performance Tubing Inc, Irvington, New Jersey, U.S., has been announced by Titanium Metal and Alloys of 85 London Wall, London, EC2 (01-628 6141).

A new product, finned heat exchanger tube called Fine Fin, is to be marketed. It is stated that this product achieves a greater outside surface area by a combination of more fins with less fin height. This calls for less severe working of the tube material.

● TRANSPORT

Fish kept fresh in transit

A TIPPER body which operates like a mobile refrigerated fish tank capable of carrying fish either live or dead over long distances, has been successfully tested by bodybuilder E. M. Wilcox of Royce Road, Carr Road Industrial Estate, Peterborough (0733 63585).

The tipper has a refrigeration system which keeps water temperatures at preset levels and an oxygeneration system.

The body has carried cod and mackerel from North Sea ports and also carried live shellfish—lobster and crab—in boxed palletised loads in sea water.

Wilcox says it solved the problem of refrigeration by building the body with double skin sides. The inner skin is 10 gauge aluminium alloy and the outer skin 18 gauge. Between the two panels run one inch square aluminium alloy coils attached to a refrigeration unit fitted on the body chassis.

The coils reduce the temperature of the inner skin keeping the water at a pre-set level of between 10-30 degrees F for sea water and between 40-50 degrees F for fresh water.

The coils run almost the full length of each side of the body. They have good ductility to allow them to "give" with the deflection of the body sides during transit and are covered with insulating material. The coils have a flexible connection to the refrigeration unit which allows full tipping without damage.

The oxygenation system diffuses filtered air into the water through holes in a series of pipes running along the floor of the body.

● MACHINE TOOLS

Bends the metal

A NEW type of Italian 3-roll hydraulic bending roll made by Verrina SpA of Genoa has been ordered by A. W. Alloys.

A. W. Alloys is to use the machine, in the manufacture of large diameter pipework and process vessels for the offshore, petrochemical and cryogenic industries, in materials ranging from aluminium and copper alloys to stainless steel.

The machine, with a mild steel plate capacity of 15 by 3 metres, is being supplied with a small diameter interchangeable top roll and plate squaring attachment.

Verrina SpA UK office is at Wellington House, 67 Wellington Street, Leeds 3. (0532-459040).

● HAND TOOLS

Bending and trimming

OF INTEREST to electronics production line managers are two hand tools recently announced, one for component leg bending and the other for trimming.

Eraser International, Portway Industrial Estate, Andover, Hants SP10 3LU (0264 51347) can supply lead forming tool PR2 designed to bend the legs of components such as resistors and capacitors through 90 deg with pitch centres between 12 and 15 mm. Adjustment is by a knob on the side of the tool; two pointers are lined up with the corresponding holes on the printed board, thus setting the bending dies to the correct dimensions. Then it is merely a matter of inserting the component into the tool and pushing the handles to give the required bend.

The other unit is from Welwyn Tool Company, Stonehills House, Welwyn Garden City, Herts (Welwyn Garden 29121) and is a pair of cutters specifically designed for getting into difficult locations to trim excess lead lengths from soldered boards. Called Microshear II the tool combines a thin cross-section with good spring design and has been tested to 2m. operations.

● METALWORKING

Plant to be expanded

PLANS FOR increasing production facilities at its Watford, Herts factory have been announcing by shelving system manufacturer Spur Systems International.

About £500,000 is to be spent on the project which is to be supervised by industrial management consultant Handley-Walker. On completion, the manufacturing area will be increased by two-thirds.

New machinery on order includes a fully automatic electrostatic powder coating plant which will coat all Spur steel shelving components with a tough knock-proof finish. A high-speed rolling mill handling up to 100 ft of steel coil per minute is also to be installed.

A new packaging area will be equipped to skin-pack Spur brackets and accessories and shrink-wrap wall uprights for the company's do-it-yourself range.

● COMPUTING

Will show sales trends

THE POSSIBLE effects on sales of unexpected events, from strikes to tax changes—even adverse weather—can be seen rapidly using a computer service offered by Seicon Computer Services, Brick Close, Kiln Farm, Milton Keynes MK11 3EJ (0908 565656).

Called Scycic, the service is run from a terminal in the user's office and is intended to provide sales, marketing and production management with short-term predictions. The user has only to answer simple questions and needs no computer knowledge.

Most forecasting systems derive a model from successive sales data and forecasting errors. This approach works well provided that the forecasting model is reasonably representative of the real world and that the real world does not change.

● HEATING

Projects infrared energy

SUITABLE FOR many applications in industry including drying and thermoforming are ceramic heaters which produce no light but only infrared radiated energy.

Called Salamander, the devices are available in wattages from 100 to 1,000 with a maximum size of 245 x 60 mm. The emitter bodies are moulded from a ceramic compound to give maximum resistance to thermal shock and reduce expansion and water absorption to a minimum.

Embedded in the ceramic, the elements are made from selected conductors to give a constant wavelength for the appropriate wattage. The elements are also coated to allow for the different coefficients of expansion and so give long life.

More from Infrared Internationale, 121, South Western Road, Salisbury, Wilts (0722 4555).

● AGRICULTURE

Cutting up the logs

THE LATEST Forestor-150 horizontal bandmill has been designed not only for those running a large sawmill but also for the estate owner or farmer who prefers to do it himself.

The power unit can be electric, diesel or petrol and it has been designed to accept most popular makes of engine. Maximum diameter of log that can be sawn is 1,500 mm (5 ft).

Two blade speeds can be selected—25 or 35 m/sec and at each blade speed there is a choice of a low range or high range of feed speeds, up to a maximum of 40 m/min.

The machine is made by Forest and Sawmill Equipments (Engineers), 35 West Hill, London SW18 1RB (01-870 5400).

COMPANY NOTICES

Ford

BEARER DEPOSITARY RECEIPTS

Following the DIVIDEND DECLARATION by the Company on 12 July 1979 NOTICE is now given that the following DISTRIBUTION will become payable to Authorised Depositaries on or after 12 September 1979 against presentation to the Depositary (as below) of Claim Forms (obtainable from the Depositary) listing Bearer Depositary Receipts.

Gross Distribution per Unit	5.00 Cents
Less 15% U.S. Withholding Tax	75 Cents
	4.25 Cents per Unit
Converted at $2.26	£0.01880531

DEPOSITARY
National Westminster Bank Limited
Stock Office Services
5th Floor
Drapers Gardens
12 Throgmorton Avenue
London EC2P 2ES
6th September 1979

NOTICE OF RATE OF INTEREST

U.S. $100,000,000 Guaranteed Floating Rate Notes Due 1994

Citicorp Overseas Finance Corporation Limited

(Incorporated with limited liability in the British Virgin Islands)

Unconditionally guaranteed by

CITICORP

In accordance with the terms and conditions of the abovementioned Notes and Agency Agreement dated as of March 5. 1979 between Citicorp Overseas Finance Corporation Limited, and Citibank, N.A., notice is hereby given that the Rate of Interest has been fixed at 12[illegible]% per annum and that the interest payable on the relevant Interest Payment Date, namely December 10, 1979 against Coupon No. 3 in respect of U.S. $1,000 nominal of the Notes will be U.S. $32.39.

September 10, 1979
By: Citibank, N.A., London, Agent Bank

CITIBANK

KOMATSU LIMITED
(Incorporated in Japan)

ORDINARY SHARES EDR'S ISSUED BY CITIBANK N.A. LONDON

NOTICE IS HEREBY GIVEN that a Dividend due 30th June 1979 may now be claimed at the rate shown below on presentation to the undersigned of Coupon No. 20 together with the special listing forms which are available from the undersigned.

Gross dividend per share	US$0.018018
Less 15% Japanese Withholding Tax per shares	US$0.002703
Net dividend per shares	US$0.015315

United Kingdom Income Tax at the reduced amount of 15% in the £ will be deducted from the amount of this dividend except in cases where coupons are accompanied by United Kingdom Inland Revenue affidavit of non-residence.

CITIBANK N.A.

Friars House,
39,41 New Broad Street,
London, E.C.2.

H J HEINZ COMPANY LIMITED

NOTICE IS HEREBY GIVEN that the Transfer Books of the 3.15% (formerly 4½%) Redeemable Cumulative Preference Shares of this company will be closed from 2 to 30 October 1979, both dates inclusive.

J A ROSS,
Company Secretary.

Hayes Park,
Hayes, Middlesex.
9 September 1979.

BLUE CIRCLE INDUSTRIES LIMITED

NOTICE TO HOLDERS OF BEARER WARRANTS

NOTICE IS HEREBY GIVEN to the holders of the Company's Ordinary Stock Warrants to Bearer that an Interim Dividend of 3.6% on account of the year ended 31st December, 1979 will be paid on or after Monday, 22nd October, 1979 to holders of Bearer Warrants upon presentation of COUPONS No. 37.

Warrant holders who are employees of Blue Circle Industries Limited or any of its Subsidiary Companies, should follow the instructions shortly to be displayed on Company notice boards; warrant holders who are not employees must present their COUPONS NO. 37 to the Company at the address shown below through an Authorised Depositary, e.g., Banker, Solicitor or Stockbroker, on or after 22nd October, 1979.

By Order of the Board,
H. W. R. HAM,
Secretary.

Portland House,
Stag Place,
London SW1E 5BJ.
7th September, 1979.

L.E.T. HOLDINGS LIMITED

A DIVIDEND has been DECLARED of 1.65p per share payable to the holders of Ordinary Shares registered 28th August 1979 and to holders of Coupon No. 109 attached to Ordinary Share Warrants to Bearer. The dividend will be paid on 7th September 1979. Coupons must be lodged with Charter Consolidated Limited, Bearer Reception Office, 40 Holborn Viaduct London EC1P 1AJ, where listing forms can be obtained.

By Order,
D. J. PHILLIPS, Secretary.

St. Martin's House,
16 St. Martin's-le-Grand,
London EC1A 4EP.

PUBLIC NOTICES

DUDLEY METROPOLITAN BOROUGH BILLS

£2,100,000 Bills issued 6.9.79 maturing 6.12.79 @ 13 25-64%. Applications totalled £23,100,000 and there are £5,600,000 Bills outstanding.

FINANCIAL TIMES SURVEY
Monday September 10 1979

Coal Mining

Although society has traditionally viewed coal mining as an out-dated and clumsy industry, doomed to extinction, world oil prices and other problems have once again forced coal to the top of the energy agenda. Major coal producers are now seeking ways to boost output — but there remain strong reservations surrounding the wholehearted exploitation of coal reserves.

World efforts to boost output

By John Lloyd

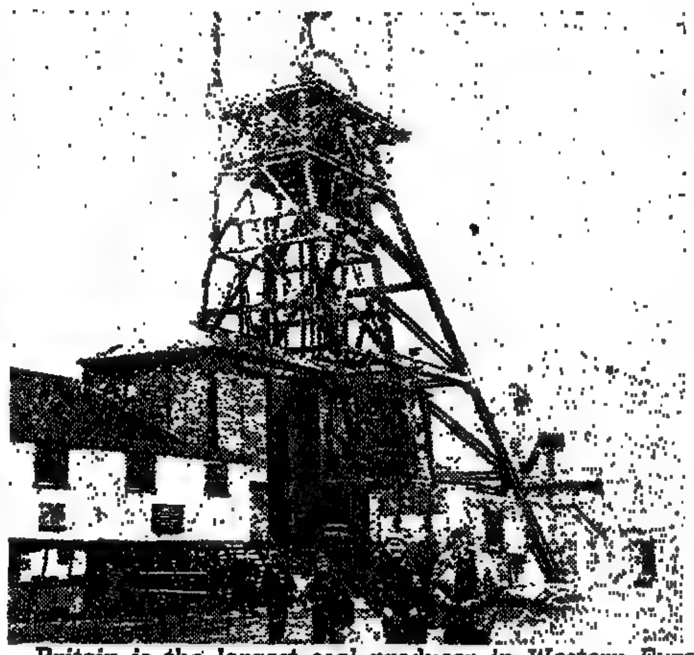
IN MOST of the world's industrialised countries — especially in Europe and, most of all, in the UK — the large scale production of coal is intimately associated with the beginning of large scale factory production. This fact is important in understanding the responses made by the countries of the world to successive "energy crises" and their re-evaluation of the use of coal.

Coal fuelled industrial revolutions — first in the UK, throughout Europe, North America, then across the world. In the course of doing so, it became embedded, not just in the coal-producing nations' industrial life, but in its political and social cultures as well. Miners, in a number of European countries, played early and crucial roles in the developments of the Labour movement: the privations of mineworkers — men, women and children—were an early and powerful cause for State interventionism, the advocates of legislation capitalising on the reservoir of sympathy which descriptions of miners' labour commanded.

In part, the position which coal took in the nation's culture was due to its critical economic importance, the fortunes which were made and lost in producing it and the army of labour it created. In part, too, it was a reflection of the political importance of mining communities, especially when, in Britain, many of them were enfranchised by the 1867 Reform Act.

It was also a reflection of the mystique which has surrounded coal mining from its earliest days—and which still does. Mining communities were often isolated, wholly concerned with one industry, objects of suspicion or even fear from outsiders. But it was mainly the act of going underground for long periods, and of winning the coal from the unyielding strata of rock, which attracted the respect which mineworking has usually been accorded, and which has set the industry apart from others.

This powerful, traditional view of the industry is, as far as it is now concerned, a two-edged one. It can be an advantage: the industry, both on the management and union sides, can play upon the special position it enjoys when asking for investment funds, or for higher wages (the miners are again top of the wages league in the UK, their accustomed position). But it can also be a disadvantage: society's view of coal mining may be sympathetic and is often romantic, but it tends implicitly to consign it to the past—it is seen as a 19th century phenomenon, massive, clumsy and doomed to extinction.



Britain is the largest coal producer in Western Europe. Views of the industry, above and below ground: (left), miners coming off shift at Betteshanger Colliery, Kent, and (right), a miner adjusting powered supports at Bentley Colliery, Doncaster

This view is intangible—but enormously important. For coal is now needed; again, forced to the top of the energy agenda since the 1973 OPEC oil price rises and again, more recently, by the revolution in Iran, and (less dramatically) the nationalisation of BP's assets in Nigeria.

President Carter has called on greater coal production and use, as has the Council of European Ministers, the International Energy Agency and—among individual European states—the UK and West Germany.

In the East, the Soviet Union, China and Poland are major producers with plans at least to double their coal outputs by the end of the century: while elsewhere in the world, Australia and South Africa are finding that their plentiful coal production may be increasingly tradeable, internationally.

These moves—and others—should greatly hearten the coal producers, and indeed they do. But there are still a number of reservations, doubts and problems which surround wholehearted exploitation of coal reserves—especially in the West—and which are retarding that exploitation.

These doubts and reservations often flow from the above view that coal is inappropriate to the age which has been dubbed "post-industrial" (Daniel Bell) or "technotronic" (Zbigniew Brzezinski). But how deeply rooted are they in fact? The following are some of the more salient beliefs about the industry, with a brief estimation of their accuracy:

● It is "enormously expensive." It is. Mining, as its practitioners constantly remind us, is an extractive industry: in order for it to continue, or to expand, new resources must continually be proved and opened up. A great deal of work has to be done in a colliery before the faces are uncovered and coal can be won in commercial quantities. Selby, the NCB project in Yorkshire, the largest development of its type in Western Europe, will take ten years to construct and cost more than £600m: the NCB's investment in the current year is £550m. Such figures, however, are meaningless in isolation: how competitive is the end product of coal mining with other energy resources? This is the subject of our next belief.

● Coal "cannot compete with oil, gas and nuclear power." Coal cannot compete with gas as a means of heating the home. For the rest, one must say: it depends. The comparative prices of oil and coal to power stations are in favour of coal, but (even after Iran) not by much.

As the Electricity Council noted in its recently published *Medium-Term Plan*, coal prices will tend to rise with oil prices. Coal has a slight price advantage, but must keep that because oil has the advantages of ease of handling and greater efficiency. However, when costs such as those incurred on the balance of payments are taken into account, then — the coal lobby argues — the economics of raising steam by coal become much more obviously favourable.

A comparison between coal and nuclear power is even more problematic. Studies have been made by the International Energy Agency's coal research division, which suggest that, on certain assumptions (on discount rate, crucially) coal-fired power generation can be cheaper than nuclear. Yet it must be said that it is the commonly accepted view, even of the coal industry, that nuclear has the price edge.

● Supplies of coal are "vulnerable to industrial action": They are, like most other commodities. This view of coal production has been powerfully reinforced in the UK in the 70s by two dramatic miners' strikes, in 1972 and 1974. Before the 70s—though there had been no national stoppages — the industry was notorious for pit by pit or area stoppages—indeed, it was partly the conclusion of the National Power Loading Agreement in 1967, which cut back on pit by pit strikes, that a national action was made more possible. Coal, however, is not unique in this regard, and mineworkers appear unlikely to take prolonged industrial action while their pay remains relatively high.

Probably more serious for the Coal Board in Britain is the adamantine stance recently adopted by the National Union of Mineworkers on pit closures: twice in the past year, the Board has narrowly avoided

CONTINUED ON PAGE III

More UK investment planned

BRITAIN IS the largest coal *producer in Western Europe,* well up in the second rank of coal producers worldwide (i.e. *those* countries which come after the "big three" of the U.S., USSR and China), has *proven* coal reserves which would last more than 300 years at the current rate of exploitation (45bn tonnes) and possesses a "coal lobby" of considerable strength.

Since 1973-74, when the coal industry, coal unions and Government agreed on "The Plan for Coal" (which reversed the industry's 20 years of decline), the importance of the coal industry has gradually become accepted *by most* sections of society. There are still a number who see a reduced *role for coal:* there *also remain* many who see its projected growth of output—from around 120m tonnes this year to 135m tonnes in 1985, then to 170m tonnes in 2000—as over ambitious, and probably not required.

However, the more serious doubts about its future growth have been largely removed since it became obvious, as it has over the past months, that *the Conservative Government* would share the same policy towards the industry as the out*going* Labour Government did, and indeed may, in the short term at least, be prepared to commit even more funds to the industry than did its predecessor. The fact that there is an effective bipartisan policy on the industry, which contains —as far as can now be seen—difference of emphasis only is the largest single element in underpinning coal's future.

The common planks of this bipartisanship are:

- Recognition that oil reserves, both in the UK and worldwide, will tend *towards exhaustion by* the end of the century, and that real prices will have doubled *by then.*
- Natural gas will also be tending towards exhaustion (lacking *any new major discoveries).*
- Even granted a vigorous nuclear programme (and there must be doubts about its public acceptability), coal will be required both as a power station fuel and—towards the end of the century—as a source of substitute gas and oil.
- *The cost of investment in* coal will be high, both because investment was low in the late *fifties, sixties and early seven*ties and present spending must make up for that, and because access to new reserves depend to a large extent on "super-pits"—such as Selby, now well under way, and Belvoir, still to receive planning permission—which will be costly (but which, it is believed, will fully justify their initial capital costs).

The Labour Government conceived the Plan for Coal as a tripartite arrangement, where the National Coal Board, mining unions and Government exercised joint control of its development, with executive authority vested in the NCB: the present Government has decided to retain that structure.

The Labour Government supported increasingly large capital expenditure, and from time to time, gave grants to the industry, either to support stocks or to subsidise the price of power station fuels: the present *Government believes investment* should continue at the current rate (now running at £550m a year), *and is likely to acknow*ledge the need for grants as circumstances appear to demand *them.*

Where there is likely to be significant shifts, however, is in *the area of financing.* Plans under consideration in the Department of Energy envisage *the capital requirements of the* NCB, presently wholly supplied by loans, being in the future *substantially supplied by public* dividend capital, perhaps as high a proportion as 50 per cent.

The advantage of this to the NCB is that its interest burden *would* immediately lighten: since most of its high capital cost propects have a lead time of ten years, it could repay its shareholder—the Government—when it received the benefit of the investment.

Second, it is likely that the Government may relieve the Board of its commitments to the more than 200,000 pensioners and miners' widows, which costs the NCB some £35m a year.

Third, it may seek to encourage the closure of old, uneconomic pits by offering high redundancy or transfer payments (the latter are regarded as the more important), bearing the costs of these extra payments itself. The presumed financial benefit to the board *would be the shedding of* loss-making capacity, and the release of resources to open new, more *productive mines.*

Proposals

These ideas now wait for Government approval. All of them, especially the first (which has long been a Coal Board proposal) are likely to find favour with the industry's management. How are they likely to be received by the mining unions, crucially the National Union of Mineworkers?

The first two proposals are unlikely to be controversial—though there may well be some suspicions that the injection of public dividend capital is meant *to pave the way for a later entry of* private capital. It should be said that NCB executives express scepticism *on this possi*bility: where are the shareholders, they ask, who would be *willing to see their capital lie* dormant for 10 years before it attracts a return?

*The third is self-*consciously controversial: indeed, it is designed to relieve a problem *which has* been round the neck of the NCB for some time, and which has been the major source *of* conflicts with NUM: that is, the matter of pit closures.

Resistance within the NUM had been hardening to closures for some years. It was felt that, since the Plan for Coal assumed a need for all the coal that it was possible to get, then *collieries* should be kept open for as long as the coal was workable, even though they could not be worked at a profit.

Last year, the union passed a resolution to oppose closures. Since then, there have been none. An attempt to shut Walton Colliery, in North Yorkshire, was abandoned by the board: and more dramatically, the *board reversed its own decision* to close the Deep Duffryn Colliery in South Wales a £20,000-a-day lossmaker which the board was convinced could not be made to pay.

Strong union pressures, including an apparent willingness to call a national strike, was coupled with probable behind-the-scenes pressure from the Government, anxious to avoid an early confrontation with the mineworkers *when stocks of* coal were low—and thus Deep Duffryn has been kept open, a *new face has been started,* and while stringent conditions have been laid down that the face *must show* a profit within three months, and every three months thereafter, both sides would agree that the confrontation has been postponed, not avoided.

It is just this sort of scene which the proposal to increase redundancy and transfer payments to much higher levels than presently exist is designed to avoid. If mineworkers with a long service in the pits were *offered several thousand pounds,* then, it is argued, they would be more willing to leave the *industry and find work* elsewhere. More importantly, if miners in uneconomic pits know that a mining job awaited them in another pit, possibly in another coalfield, and that a high premium, as well as expenses, would be paid to them when they moved, then they, too, would be unlikely to protest overmuch.

The argument is narrowly economic: it assumes that loyalty to union or local officials, reluctance to move and desire to stay in the mining industry can be *overcome* by high cash payments: it may, of course, be correct.

These new measures are likely to be approved in the coming autumn/winter, as par*liament re-assembles*—about the same time as the board faces a major test on a comparatively *new front,* that dominated by the environmentalists. Its proposal to develop a large-scale 7m tonne a year mining project in the Vale of Belvoir, in north-east Leicestershire, has met fierce opposition from local and nationally-based groups. For the first time, the NCB must not only prove in a public forum its need for Belvoir coal, but also its need for the Plan for Coal.

It was clear from the preliminary enquiry into the NCB's application, held in April, that the range of opposition was both wide and deep. It is probable that neither board nor Government believes that it will lose the case (though the NCB may suffer a reduction in its plans). It will, however, be exposed to some hard questioning, and will have to justify itself publicly as never before in the past four years.

John Lloyd

EEC pledges help to renew coal industry

THE HISTORY of coal within Western Europe could be graphically represented by a curve. Beginning at a high point in the early 1950s, coal sinks to a comparatively minor order of importance in the later 1950s and 1960s, then begins to rise once more in the mid-1970s—though that "rise" is as yet confined to intention and investment, and is still unreflected in production figures.

It was, of course, one of the two basic industries which were the cornerstones of the European Coal and Steel Community, established by treaty on May 9, 1950. Three years later, the ECSC was given transnational powers over the industries in the original six member-states, marking a partial renunciation of national sovereignty in favour of a supranational institution, and serving as a fore*runner of the European Com*munity, into which it was later incorporated.

As a report on "25 years of the common market in coal," published last year by the EEC, *states: "The announcement of* the beginning of the transitional period (in 1953) meant the *establishment* of the common market and the opening of frontiers between member-states of the Community.

"The final opening of frontiers brought protection of national markets to an end. All quantitative restrictions on intra-Community trade in these products (steel and coal) were *abolished together* with import and export duties or charges having equivalent effect.

"All *discrimination* with regard to freight rates and conditions of carriage based on the country of origin or destination was to be abolished from that date, and double tariffs between member states of the Community were no longer to be allowed. A new economic reality was taking shape."

That it was—but the implications for Western Europe were much weightier than the trade in, or production of coal, was to be. Only in the early years of the ECSC did coal production and use continue to expand: by 1957, the era of cheap oil had begun, and coal entered into a sharp decline.

Decline

From providing 66 per cent of the six member-states' energy needs in 1953, it sank to 20 per cent of the needs of the enlarged Community in 1977. In the course of that decline, more than 700,000 mineworkers were displaced from the industry; coal production has halved: the number of collieries in 1976 was a third of the number in 1953.

What, then, is the present position? First, there are only two producers left with substan*tial industries: West Germany* and the UK.

France still produces between *23m and 25m tonnes of* coal a year, but the reserves in all parts of the country except Lorraine are near to exhaustion (this is especially the case in the Pas de Calais field, which is scheduled to decline very fast indeed, in the next few years). Charbonnages de France, the State mining company, did revise its plan during the 1973-1974 oil crisis, but decided that the best it could hope for was a *slowing down of the rate of* decline, taking out only 1m tonnes of production a year as against 3m tonnes. The company has invested in some new capacity in Lorraine.

Belgium, which should also be mentioned for the sake of completeness, now produces around 7m tonnes a year: that figure, too, is targeted to decline to 6.5m tonnes at best by 1985, largely as a result of the closure of the anthracite pits in the country's Southern Basin coalfield in the early 1980s, due to exhaustion.

We discuss the UK situation in more detail in the above article. In the case of West Germany, the industry remains relatively healthy: and while, like every other industry in Western Europe, it had accepted a rundown as a fact of life since the late 1950s, it now seems that it will expand again and join the UK in turning the industry round.

When in 1973, the Federal Government presented its first energy policy programme, it assumed that hard coal output should continue to fall from around 100m tonnes to 83m tonnes in 1978, while its share of the primary energy market *was seen as falling from* 24 per cent in 1972 to 11 per cent in 1980.

As *elsewhere, expectations* were revolutionised by the events of 1973 in the Middle East. The first revision of the energy policy programme, presented in 1974, assumed that coal would be used to fill energy needs as far as possible: production of hard coal was to be stabilised at around 95m tonnes, investment and research were to attract increased funds, while coal stocks and coal prices received large subsidies.

Lignite, or brown (soft) coal production from open cast sites now runs at around 35m *tonnes* a year: all of it is destined for power stations, where it forms an economical fuel. However, the deposits are very largely in the built-up area round Cologne, Dusseldorf and Aachen, and for these reasons, only one more site is in prospect.

Present production of hard and brown coal together is around 126m tonnes, and most forecasts see that level being kept stable for the end of the century. However, both Government and mining industry figures show demand for coal increasing, with exports making up the gap—as much as 73m tonnes by the year 2000, in the case of the Government's figures, or 34m tonnes according to figures produced by independent institutes.

Reserves are reckoned to be sufficient for production to rise —but the high cost of producing German coal—it now costs around £35 a tonne, though the price is subsidised down—acts as a powerful disincentive on the state to greatly increase production.

Loans

The European Community/ECSC *is* now dominated by German and UK interests in coal, as one would expect. While *the operation of the* EEC has greatly assisted the smooth rundown of the industry in the past, and is now assisting its renewed growth in the two leading countries by providing grants and soft loans, it cannot paper over the real differences which exist between producers and consumers.

For the UK and Germany—especially for the former—expansion of production depends upon expanding markets. For both, the home market is overwhelmingly the most important: but both wish to sell both coking and steam coal abroad. They are largely prevented from doing so by the cheapness of third country coal —Polish, Australian, South African and American. We shall return to the ponderous moves being made to subsidise steam coal burning in the EEC later in the survey.

Here, we should note that the *EEC has, in the aftermath of* Iran, again pledged itself to increased coal use, and con*tinues to place maximum im*portance on domestic production.

We should also note that both France and Italy have very large nuclear power programmes: that Britain is likely to, at least, partly follow suit: and the West Germans would also like to do so. For the moment, the price of oil and the need for two major energy sources has kept the struggle between coal and nuclear power in Western Europe a latent one —but for how much longer?

J.L.

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Targets raised by major producers

THE THREE major world producers of coal are the U.S., the Soviet Union and China. There are also a number of significant "second rung" producers, Poland, South Africa and Australia.

In all cases, production is targeted to expand, both for domestic use and for the export markets (though exporting plays a minor role in the cases of the U.S. and the USSR). In some, production is supposed to be doubled by the end of the century, or sooner.

● The U.S. now has an output of around 700m tonnes, which is targeted to double over the next seven years if President Carter's ambitious energy plans are to be fulfilled. Certainly, production must increase rapidly: not only is there a pressing need to lower the $50bn annual bill for imported oil—the nation's utilities are planning on building some 240 more power stations of various sizes over the next seven years, which will burn some 400m tonnes alone.

Plans are afoot to meet demand—the 100 largest coal producing companies in the U.S. are planning on more than 330 mine expansions or new projects, which in turn are expected to add over 600m tonnes of capacity. This growth would call for 200,000 more mineworkers, who in their turn would require greatly expanded training programmes.

Ironic

It is seen as ironic, if in the circumstances inevitable, that the world's most technically advanced country should have, as one of its greatest employment opportunities to the end of the century, an industry which had its heyday in the 19th century.

As discussed elsewhere in this survey in the article on opencast mining, U.S. opencast production now accounts for around 60 per cent of the total, up from 50 per cent in 1972.

Opencast mining can be expanded much more rapidly than deep mining: increasingly, major sites are being planned as part of a power generation complex. Operators, while increasingly bullish about the future, still complain bitterly about government regulations, claiming that expanded production and environmental constraints are contradictory.

Mr. Carl Bagge, president of the National Coal Association, said last year that "excessive government constraints have already contributed to the sharp decline in the U.S. metallurgical coal exports in recent years . . . a major factor in the higher cost (of coal) is the substantial increase of government regulation of the U.S. coal industry in recent years."

It might be said that, especially in health and safety, such regulation was often overdue: and that on environmental matters, local government often sets the pace.

Finally, the U.S. miners union—the United Mine Workers—has suffered a series of reverses. A strike undertaken by the union in 1977, and lasting more than four months, exposed its weakness: only 50 per cent of the country's production was halted (compared with 70 per cent during a strike only three years before), which cut 10 per cent off the nation's total energy needs.

The strike was marked by fierce hostility on both sides, with pitched gun battles and constant physical violence, including an apparently automatic recourse to the law by the mine owners. The UMW was shown to be militant, but badly led: it did not win its objectives, and ended the strike weaker than it was when it began it.

● The Soviet Union has the largest national coal industry in the world, producing around 750m tonnes of coal last year, two thirds of which was deep mined. Coal provides around one third of national energy needs, compared with the U.S. figure of one fifth.

The major reserves of the USSR are concentrated in the eastern part of the country, though there are scattered deposits throughout.

The main fields are the Donetz, Pechora and Moscow region basins in European Russia, and the Kuznetsk, Karaganda and Ekibastuz basins in the east. Of these, the Donetz region is by far the most productive, accounting for nearly one-third of all Soviet production.

The five-year plan for the industry calls for an increase in output to 805m tonnes by 1980, of which 35 per cent will be accounted for by opencast mining. Productivity, reportedly causing mining officials some worry because of its comparatively low levels, is nevertheless claimed to have risen by 40 per cent per manshift over the five year plan period 1971-75, largely due to an expansion of automation and mechanisation.

Conditions

The working conditions planned for miners, however, appear good by Western standards (though they are not yet implemented). They include —shortening the working week to 30 hours; between 4-8 weeks leave annually, depending on climactic conditions; retirement at 50; the provision of kindergartens and subsidised housing. As in many countries, mineworkers are among the highest paid industrial workers in the country.

● China's coal industry has attracted some attention in the west over the past year, largely because it has been recognised that it is the base upon which the modernisation programme must partly rest, and also because it both provides a market for British exporters and may, if the Chinese have their way, prove to be a means of payment as well.

British officials and businessmen were not wholly delighted when they learned that the Chinese Government were serious in their intention to pay for some imports by coal: the policy would hardly have been popular with the National Coal Board in the UK, even less with the National Union of Mineworkers.

However, it now appears that a deal may be done, under which the UK will act as a factor for Chinese coal, selling it on the world markets and keeping some of the proceeds.

China's reserves total more than 200bn tonnes: present production is somewhere between 400m and 500m tonnes, and is targeted to grow to 725m tonnes by 1985.

Compared with the other major producers, mines in China are still technically backward: only 50 per cent are fully mechanised, and many of these are using 1950s Soviet technology.

Coal has traditionally been extremely important to Chinese life: until the mid sixties, it provided around 90 per cent of the country's energy needs: even now, the figure is estimated to be around 80 per cent. Production has been growing steadily since the fifties—though by 1974, according to Chinese officials, the rate of growth had dropped from 25 per cent to three or four.

In 1975, the management of the mines was re-organised, and placed in a separate Ministry of the Coal Industry, and since then output is claimed to have reached former growth rates. Exports are mainly to Japan, with which country a long-term agreement to supply between 2m and 3m tonnes annually is now being considered.

● Poland produces around 220m tonnes of coal, of which some 40m tonnes are brown coal: coal supplies around 80 per cent of the country's primary energy needs. As in West Germany, brown coal is used in power generation, together with some low-grade hard coal.

As far as Western Europe is concerned, Poland is a major source of cheap coal: it exported over 40m tonnes last year, and must continue to raise its coal exports to win much-needed hard currency: production expansion plans are being framed with export markets very much in mind.

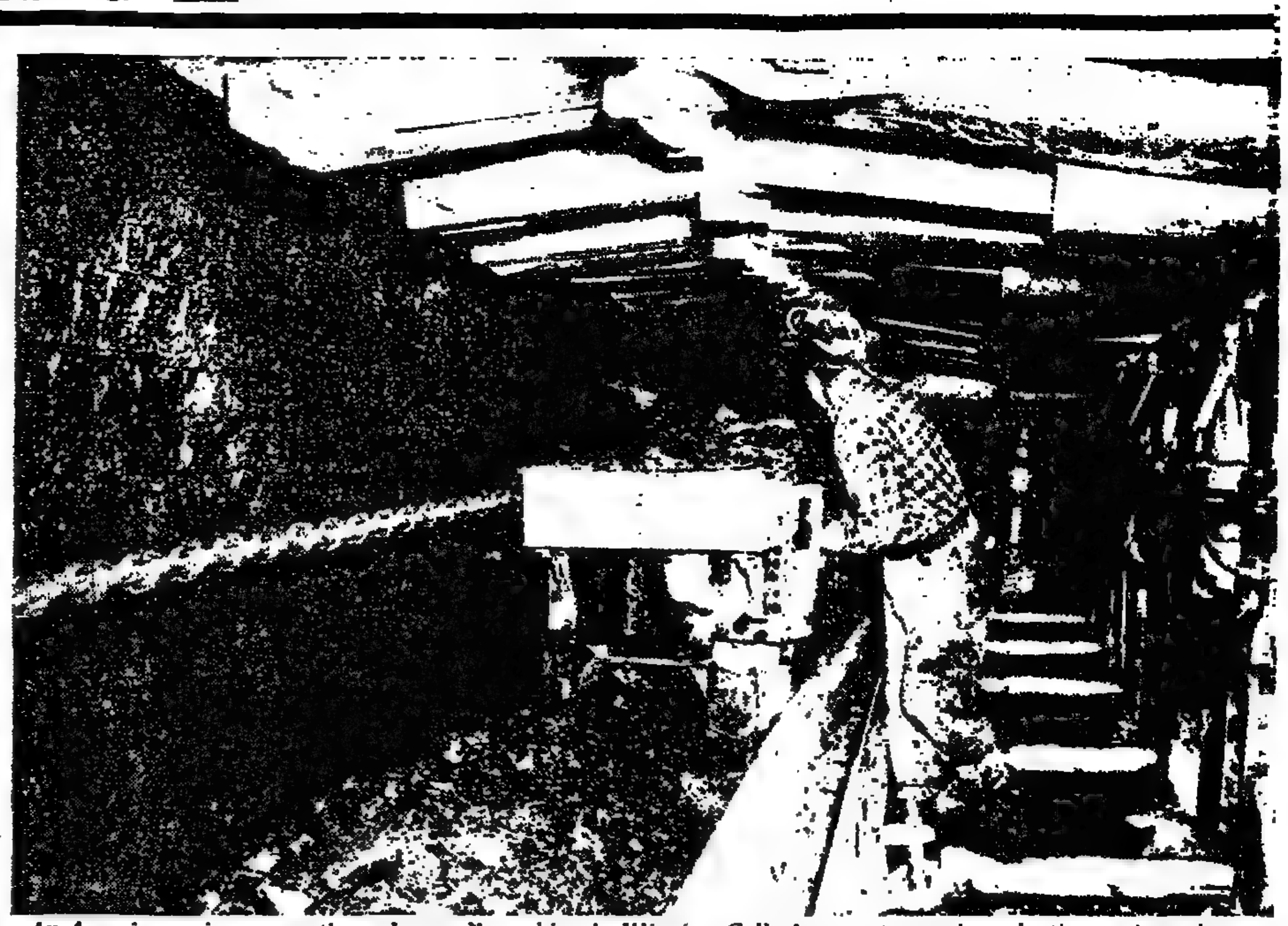
● South Africa produces between 80m and 90m tonnes of coal, of which around 77 per cent is used for the country's own energy needs. The country has the largest oil-from-coal refinery plant in the world, using 5m tonnes of low grade coal a year: a second plant, using initially 12m tonnes of coal a year, is planned to be completed in 1981.

Around 15m tonnes of coal is exported, and port facilities are now being improved and upgraded to handle double that figure.

● Australia produces around 75m tonnes of coal, of which nearly half is exported, giving Australia well over £500m of export earnings, or more than 10 per cent of total export earnings. Coal is the country's single biggest export earner, and production is largely geared with overseas markets in mind.

Much of Australia's output is destined for Japan, which has virtually no indigenous energy supplies of any kind: investment in the Australian coal industry is very much open, and Japanese, British and U.S. investors are well represented.

J.L.



An American miner operating a longwall machine in Illinois. Calls for greater coal production and use have been made by President Carter as well as Council of European Ministers and the International Energy Agency

Output

CONTINUED FROM PAGE ONE

confrontation on loss-making pits—Walton in North Yorkshire and Deep Duffryn in South Wales—by opening up new faces to continue operations which it firmly believes cannot run at a profit. There has yet to be a confrontation. At the same time, no European coal producer has fought pitched gun battles with its mineworkers, as in the U.S. last year.

● Coal is "dirty and dangerous": No-one could argue that coal is clean; and mining is a dangerous profession, both because of accidents and because of lung disease. But both these hazards are declining: lung disease, or pneumoconiosis, is now practically unheard of among younger men who have begun work since dust-suppressing machinery was introduced. Death and accidents underground are on declining trends in most industries round the world: declining or not, though, it remains a high risk business.

In short, even a casual examination of "coal beliefs" reveals that they are neither all right or all wrong. Coal is dirty, dangerous, expensive and its supply is subject to disruption. The terms under which it begins to make sense are those of the given energy scene. The question is—what are the alternatives to it?

Most enthusiasts for coal run through the following check-list:

● Oil will get more expensive, is becoming scarce and its supply is insecure politically.

● Gas will become scarce by the end of the century.

● Nuclear power suffers from increasing public distrust.

● Alternative sources of energy — wave, tidal, wind and solar power — are as yet largely untested and for the moment appear commercially prohibitive.

Thus, the argument continues, coal must be developed. But there are counter arguments to all of these contentions. Oil and gas reserves may prove to last far beyond the year 2000. Nuclear power has fewer deaths attributed to it than any other energy source most of the emotion generated concerns future holocausts. Alternative sources need more capital.

As the following articles indicate there is no resolution to this debate. Coal production is being increased in many countries because, on balance, administrations feel that they need the extra energy insurance it gives: yet other states—France and Italy are European examples—continue to downgrade their use of coal, and even in Britain, there continues to be tension between the electricity industry—which wants to go nuclear fairly rapidly—and the coal industry, which wants a more measured nuclear growth in step with increased coal use.

In short, coal has not been crowned king again: it is a powerful baron, among others. There is no king.

Demand for new technology

INCREASED COAL production naturally means increased business for the manufacturers of coal mining machinery. The *technology of mining has* become increasingly complex and sophisticated: all major coal producers worldwide are seeking to increase their investment in machinery, and the market is becoming increasingly attractive and export-oriented.

In the UK, a number of companies specialise in the production and supply of mining equipment; while other general *engineering groups are looking* to upgrade, or to acquire, mining machinery divisions.

In order to understand the market, the technology employed on modern coal faces must be briefly described. There *are two major methods:* longwall mining, both retreat and advancing; and room and pillar (or pillar and stall) mining.

In longwall mining, a coal face of some *200 to 300 yards* is exposed. A conveyor is laid along the face, and above the conveyor, travelling in an opposite direction to it, a power loader traverses the length of the face, cutting into it and shearing the coal on to the conveyor.

The face conveyor carries the coal to a junction at the end of the face work in the protected on to a belt conveyor and thence to the pit bottom.

The roof above the face is supported by a wall of hydraulically-powered roof supports, which advance (the most modern are self-advancing) leaving the roof to collapse behind them.

Protection

The mineworkers working at the face work in the protected area provided by the roof supports: it is their task to advance the supports, and to control the power loader. The loader itself is a rotating drum fitted with *tungsten picks*.

In the advancing system, the tunnels on either side of the face are driven forward by a roadheader, on which a rotating drum hollows out the roadway: an "in-seam miner" extracts *the coal cut in making the road*way. In the retreat system, the tunnels are driven to the limit of the coal which is to be worked before mining begins: the face is then exposed, and worked backwards towards the pit bottom.

The room and pillar system, as its name suggests, allows coal to be extracted from squares formed by intersecting roadways, pillars of coal being left between the "rooms" to form a roof support. The coal is got by *continuous mining machines*, or by blasting: mechanised roof supports are used, but not to the extent they are in longwall mining.

Both systems are extensively in use throughout the world: in general, the longwall method is more suited for deep working, since the pressure is too great *for the pillar method to be* worked economically at other than relatively shallow depths. The deep British mines have used long-wall techniques for *many years; it is also common* in West Germany.

Room and pillar is the general system in the U.S., and is also widely used in the Soviet Union, *China, India and South Africa*.

However, as mining in the latter group of companies goes deeper, and as the need for economic workings become more obvious, more and more coal producers are turning to longwall working, partly for the higher percentage of workable coal which it gets, partly for safety.

The last point is of crucial *importance for the manufac*turers. If, as seems likely, the trend in the industry is towards longwall, the markets for longwall machinery are likely to be *large*.

Because of the UK's traditional reliance on this method, most manufacturers are geared towards production of machinery compatible with it: they are thus well placed in the growing ex*port markets. It is partly for* this reason that the industry is now being regarded, by manufacturers and by financiers, as an attractive investment for the *future*.

What are the basic elements of the longwall face? First, there is the power loader, or shearer, now often radio controlled. Then there is the armoured face conveyor, and, at *either end of the face*, the roadheaders.

Third, there are the powered supports, the most striking facet of the modern coal face.

Besides these major pieces of equipment, there are the belt conveyors—often several miles *of them in one colliery*—the locomotives for carrying men and materials to and from the face, the ventilation equipment, the electric motors and a variety *of different types of instru*mentation and control.

The cost of equipping the modern, 200-yard face with its main machinery has been *recently estimated to be just* under £1m, of which the hydraulic roof supports are by far the largest capital cost, at between £600,000 and £700,000 for the set. The power *loader* would cost upwards of £100,000, while the armoured face conveyor and junction would cost a little under £100,000.

Trend

However, the tendency within the NCB—one which is being repeated throughout the world—is to invest in heavier duty equipment. For instance, the heavy duty roof supports, which are provided with a shield which in turn creates a canopy under which faceworkers can be fully *protected*, are now coming in to more and more UK faces. The heavy duty supports may be as much as twice the cost of the conventional supports—but they *last longer, require less main*tenance and are safer.

Thus, the return to the manufacturer is likely to remain the same or even rise, though the NCB will tend to order fewer of them in years to come.

There are a large number of companies in Britain which supply equipment of one kind or another to the NCB, and which also compete in the ex*port markets. Most are highly* specialised; there are, for instance, electrical motor manufacturers, belt manufacturers, and safety equipment manufacturers.

However, there are three which are always instanced as leading companies — Dowty, which makes powered supports (the company is also strong in aviation equipment); Dobson Park, *whose Gullick Dobson* division also makes roof supports; and Anderson Strathclyde, which makes cutting and tunnelling equipment.

Others with significant shares in the market include—Mining Supplies; *Victor; John Davis*—and the mining equipment divi*sions* of the two big power plant groups, Northern Engineering Industries and Babcock and Wilcox.

Naturally, the General Elec*tric Company (GEC) is strong* in the electrical motor sector of the industry. The companies have formed an aggressive trade group — the Association of *British Mining Equipment Com*panies (ABMEC) and co-operate on a sector working party created for them by the National Economic Develop*ment Council*.

For the companies generally, the domestic market is considerably more important than the export one, and the monopoly home customer is the NCB. The figures show that exports account for between 12 and 14 per cent of production until mid-1978—though large Chinese exports will certainly mean that the proportion will rise in the current year.

Since the adoption of *Plan for Coal* in 1974, orders to the manufacturers rose sharply, and joint research and development *work*, between the manufacturers and the NCB, has also increased. While the coal in industry in the UK declined in the sixties and the early seven*ties, it nevertheless maintained* high mining standards. This aided the mining companies in their development work, and it is now claimed that they are, in aggregate, the leading producers of longwall equipment in the world, with the West Germans as the only serious competition.

The NCB aids in other ways, too. Its two overseas consultancy arms — PD/NCB (a merger between the consultancy interests of the Board and Powell Duffryn) and British Coal International, take leading *roles in identifying overseas* markets, and will usually specify UK equipment for work in which they are engaged.

PD/NCB and BCI, together with the manufacturers, believe that export opportunities are *good in China—where Dowty*, Anderson Strathclyde and Gullick Dobson won an order worth £100m last year, with Dowty taking the major share—the U.S., Latin America and India.

Finally, the NCB can act as a "shop window" for the UK equipment, *providing on site* demonstrations of the efficiency of the technology. Indeed, it is thought that the impressive advanced technology mining face at *Kellingley Colliery*, in North Yorkshire—where the powered supports were supplied by Dowty—was a large factor in persuading the Chinese engineers to place the order as they did.

However, important *as China* is, it is to the rich U.S. market where many of the UK manufacturers turn for hopes of further orders. There, longwall techniques are gaining wider acceptance: 12 longwall faces were equipped in 1978, only one of which used all-American equipment.

Both UK and West German manufacturers are strongly competitive in the U.S. market, and *though it is expected that native* U.S. manufacture will come in more strongly than it has in the past, the market should expand *rapidly and broadly* enough to ensure that orders increase for all.

Dowty is by far the strongest of the UK companies here, since *it has set up an assembly opera*tion in Philadelphia which helped supply machinery for six of the 12 longwall faces equipped last year.

The future competitivity of British equipment overseas will depend *on both quality and* price: as with other industries, the companies will not be helped by the strong pound and by growing domestic inflation.

However, quality is at least as important as price in this industry, and it would appear that the manufacturers are confident of being able to supply that.

J.L.

UK MINING MACHINERY

Total sales of UK mining machinery exports and imports (at *current prices*)

Year	Sales £m	Exports £m	Exports % of UK production	Imports £m	Imports % of UK market
1975	294.9	41.1	13.9	4.3	1.7
1976	331.6	42.6	12.8	8.0	2.7
1977	360.7	45.6	12.6	10.0	3.1

Total sales, exports and imports (£m at constant 1975 prices, seasonally adjusted)

		Total sales	*Exports*	*Imports*
1975	Q1	73.2	10.5	1.1
	Q2	69.5	11.7	0.8
	Q3	73.8	8.4	1.2
	Q4	79.4	10.5	1.2
1976	Q1	73.0	8.1	1.5
	Q2	73.4	10.8	1.8
	Q3	71.3	9.2	1.4
	Q4	66.8	7.5	2.0
1977	Q1	61.6	8.1	1.0
	Q2	66.3	7.8	1.1
	Q3	67.0	8.4	2.4
	Q4	73.7	8.5	2.8
1978	Q1	84.2	9.7	1.5
	Q2*	83.7	6.5	1.9
1975		294.9	41.1	4.3
1976		284.5	35.6	6.7
1977		268.3	32.8	7.3

* Provisional.

(Source: Dept. of Industry)

Arguments on opencast workings

OPENCAST COAL mining worldwide is caught in a pincer. Rising labour and material costs—coupled with deteriorating deep mine condi*tions in many of the world's* older mining areas—make opencast or strip mining increasingly attractive.

At the same time, the growing strength of the environmental lobbys, plus a natural reluctance on the part of those who have been surrounded by opencast workings for decades to continue to be so, makes the acquisition of opencast sites increasingly difficult.

The problem is particularly acute in the case of Western Europe's two largest coal producers, the UK and West Germany.

In the case of West Germany, its lignite, or brown coal, production is got wholly from opencast mines, situated around the *built-up areas near Cologne*. Though many West German power stations have been built for, or adapted to, lignite-burning, and while the fuel is cheap and readily available, *environ*mental pressures will almost certainly keep future development down to one opencast site.

In Britain, opencast sites are *often also unsuitably near built*-up areas—in South Wales, West Fife, Nottingham, Yorkshire and elsewhere—and here, too, opposition has been growing. The *National Coal Board must* reckon to spend a year or two on obtaining permission from local and other groups before it can begin exploitation, while the *cost of restoring the land* afterwards—a task for which the NCB are regarded as world leaders—becomes steadily more expensive.

Indeed, while the trend of opencast production has been steadily rising since the early 1970s, it fell over the past year for the first time since Plan for Coal: down from 13.6m tonnes to 13.5m tonnes. The fall is marginal: *but it reflects*, in part, the difficulties the NCB's opencast executive is experiencing in keeping its programme on target in face of delays.

In the *U.S.*, where strip mining accounts for around 60 per cent of production, the dilemma is, in certain respects, even sharper. The traditional deep mining areas in the east of the country, in Pennsylvania and *West Virginia have seen* their share of the U.S. coal market drop from 65 per cent in 1965 to under 40 per cent now: the reason why is summed up in the productivity averages.

Productivity per man-day in *deep mines averaged 8.7 tonnes* last year: in the same year, productivity per man day in the opencast sector averaged 26.9 tonnes—more than three times better.

Thus, while market pressures—always felt more keenly in the U.S. than in Europe—dictate an ever-more rapid shift into strip mining, the regulations governing opencast mining, and coal transportation, continue to multiply.

Claim

U.S. operators claim that it takes between three and six years to develop a new opencast site, and can take as long as eight.

For all that, the U.S. remains the richest market for coal, especially in the light of President Carter's as yet unapproved energy policy, which sees a *shift to coal as one of its major* preconditions for success. For this reason, a number of UK operators have been investigating the U.S. scene, and have already *invested considerable* sums in buying sites, especially on the west coast.

In the centrally-planned economies of the Soviet Union and China, *opencast mining con*tinues to grow more rapidly than deep-mined output, while environmental problems appear to be less acute.

In the Soviet Union, strip mining accounts for one third of the 750m tonne output, and is growing at a rate of 15-20 per cent a year throughout the seventies, compared with a growth rate of 12-15 per cent for deep mined *output*. As *in the* U.S., productivity is high—around 24.1 tonnes per man day in 1977.

As a survey of the Soviet Coal *Industry*, published last year, commented: "The major contributing factor for improving the efficiency of the coal industry as a whole is the higher rate of surface mining with substantially better technical economic indices than at underground pits."

In China where the Government has adopted the extremely ambitious target of raising production from around 500m tonnes to 725m tonnes by 1985,

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COAL MINING V

Research into new uses for coal

IN THE future planning of the National Coal Board, and of coal producers throughout the world, new uses for coal figure prominently. In the case of the NCB, these new uses begin to come into their own in the 1990s, and are well in train by the next millenium.

The most important and dramatic of them—the liquefaction of oil from coal—is predicted on the assumption that natural oil will be in short supply by the 1990s and in virtually no supply at all by the year 2000; while gasification makes similarly pessimistic assumptions about natural gas. Yet these do not exhaust the future uses which are dreamed of for coal.

The following is an attempt to describe (very briefly), several complex processes, most of which are still in early phases of development or research phases.

Though most people concerned with energy agree that alternative uses for coal is an important, possibly a vital, field of study, there still exist very large disagreements on the way ahead.

Each of the technologies mentioned here, therefore, is the one now favoured in UK development: but it is recognised that there are other models, under consideration in other countries by other producers.

Example

First, let us take one which is probably less of a problem than the others for non-scientists, not because the technology is simple—it is complex and problematical—but because it is a further step in a familiar technology, that of the boiler.

Fluidised bed combustion is, as its name suggests, a method of steam raising in which coal is burned in a layer, or bed, of its own ash or other granular matter, while being kept in motion by a current of air blowing upwards through the bed.

The advantages it offers over conventional coal-fired boilers are, according to the UK Department of Energy: reduced capital costs; flexibility in the range of fuels which can be used; the ability to reduce sulphur dioxide pollution by absorption in limestone incorporated in the bed material.

Work on this system has gone on in the UK since 1976, when, under the auspices of the International Energy Agency and with joint funding by the NCB, the U.S. and the West German governments, a 28 MW pressurised fluidised bed combustion facility was established at Grimethorpe, near Barnsley, in Yorkshire. At the same time, both the UK's large boilermakers—Babcock and Wilcox and NEI Clark Chapman—are working on their own experimental models. The project has moved out of the research and development phase into that of demonstration, and a number of smaller, industrial plants have been installed.

Though the programme has suffered some delays, it has generally had success: though it is believed that there are doubts on its applicability, in the longer-term, to large power plant for generation. If these doubts prove to be justified, then its future will depend on an uplift in the industrial coal-fired boiler market, one which has proved more resistant to urgings to move from oil to coal than the public utilities have.

Oil liquefaction is, as we have said, more dramatic than the other new uses so far proposed, in part because of the skilled propaganda work done on its behalf by the former junior energy minister with responsibility for the coal industry, Mr. Alex Eadie.

Mr. Eadie, a former miner, would often tell his audiences that refineries of the future would be coal refineries, and that the coal industry would be as crucial to the world as the oil industry presently is.

While the NCB and its workers now seem both more homely and less awesome than one of the "Seven Sisters," the dramatisation made the point that oil is a rapidly depleting resource, and that coal could—indeed should—be able to provide a product which will do the jobs which oil can do, hopefully when the occasion demands it.

The liquefaction of coal into oil is based on the happy chance that both contain carbon and hydrogen, though oil contains twice as much hydrogen to the given amount of carbon as does coal. The basic route to oil from coal, then, is to add hydrogen. The NCB has in hand three ways of performing this task—liquid solvent extraction, supercritical gas solvent extraction, and pyrolysis.

The first of these processes treats the coal with a coal-derived hot solvent: the resulting solution is then hydrogenated, and separated into a synthetic crude oil and a solvent, which is recycled back into the process.

In the gas solvent extraction process, high pressure gas is used instead of a liquid to dissolve the coal: the by-product "shows promise" (in the cautious words of the NCB) as a chemical feedstock to be used in the manufacture of plastics, rubbers and paints.

Pyrolysis involves heating coal in a vacuum, thus decomposing it into solid, liquid and gaseous components. While still in early stages, the process is thought to be capable of the most effective maximisation of the yield of tars, oils and gases which may be derived from coal.

The first of these—liquid solvent extraction—is by some way the most advanced. Work has been in progress at the NCB's research establishment at Stoke Orchard for some time, and a small pilot plant has been operating successfully for the past two years.

Contracts

In the past year, contracts have been let with the Matthew Hall Ortech company for the design phase of a demonstration plant, and it is hoped that a commercial plant might be in operation by the late 1980s or early 1990s.

The crisis in Iran, with its immediate effect on oil prices and its implications for future oil supply, boosted the interest shown by Government and public in the work, and at the National Union of Mineworkers' conference in Jersey this summer, Sir Derek Ezra, the NCB chairman, said that he hoped it would be able to cut down the time required to bring a commercial plant on stream.

It appears that, before the end of the century, coal refineries may indeed be a common sight on Britain's coal fields—though continuous, large-scale production of synthetic petrol demands continuous, large-scale production of coal—and it may be that UK production of imports than are at present envisaged.

Gasification is presently being investigated largely by British Gas, rather than the NCB—though the Board maintains a close interest in what, after all; may one day prove to be a large market for its product. British Gas has developed a technology known as a "slagging gasifier," in which the ash is removed as a liquid slag: the demonstration plant, at Westfield, in Fife, is being considered as the basis of a demonstration plant to be built in the U.S.

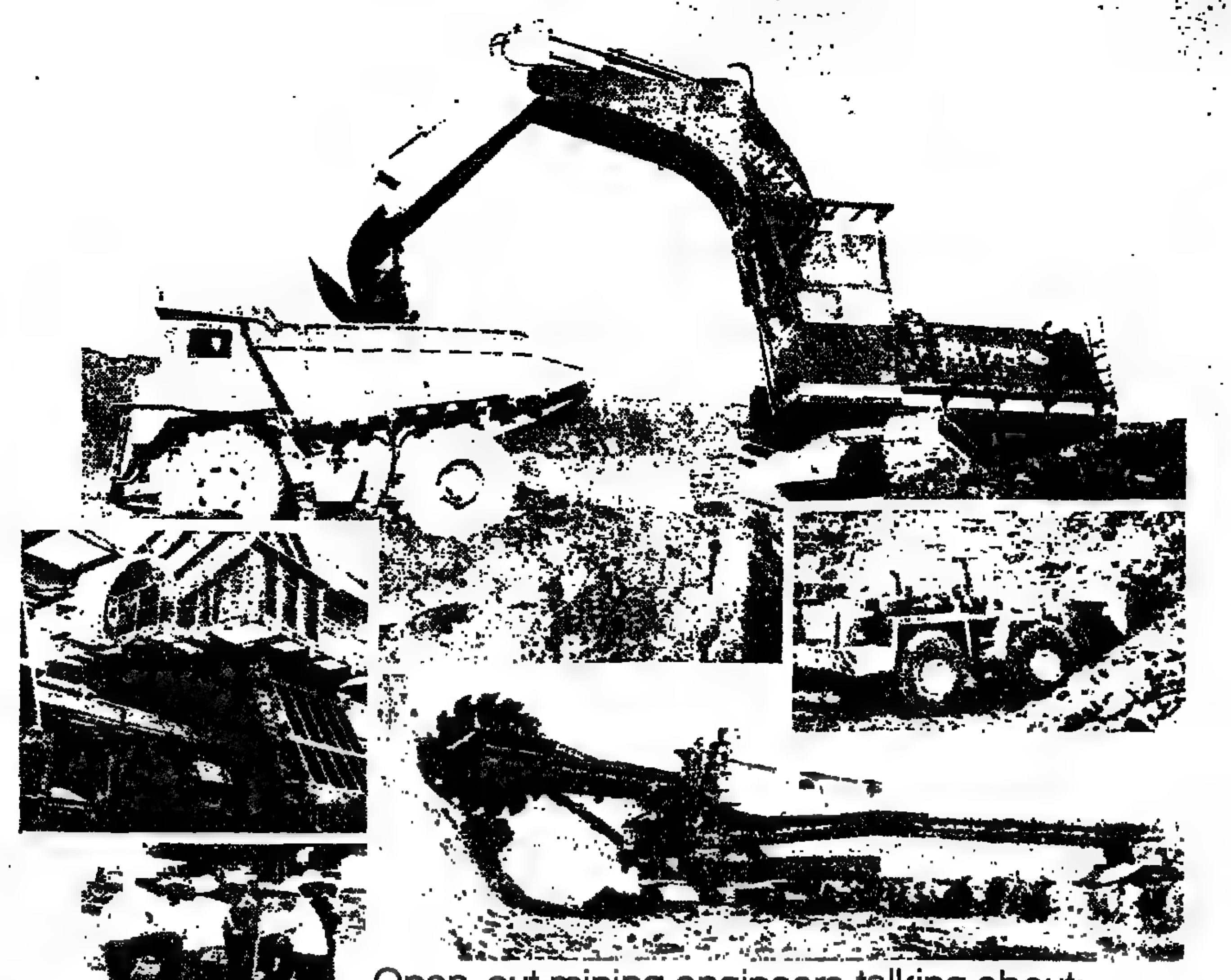
It is reckoned that a gasifier—which would produce a range of byproducts beside the gas—could become economic at some time after 2000, assuming an exhaustion of natural gas supplies from the North Sea.

Mention should briefly be made here of two other systems now under development: first, the low Btu (British thermal unit) gasification process for use in power generation. This process is aimed at raising the efficiency of the steam turbine cycle by using a combined cycle in which hot combustion gases are expanded in a gas turbine and then used to generate steam for a steam turbine. It is thought possible, by using the combined cycle process, to raise efficiencies in power plant from a maximum of 38 per cent to more than 45 per cent—a considerable improvement.

Lastly, serious interest is now being taken, by the Electricity Council, the generating boards and the Government, in systems of district heating, especially that known as combined heat and power (CHP). This is scarcely new—they have been in common use on the continent for decades, and indeed, there are small systems used in the UK, notably in Battersea and Nottingham. But it deserves inclusion here because of all the technologies considered above, it appears likely to be the one which will first attract support.

District heating is the supply of a residential/commercial district with heat from a common supply. Combined heat and power means that common supply is the heat rejected by a power station, given extra heating and boosted round a pipe network. It offers considerable energy savings on standard assumptions about the oil price: its disadvantage is that once it is installed, it must be taken up by virtually all the inhabitants of the district it serves in order to make economic sense.

J.L.



Opencast

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strip mining accounts for only ten per cent of the output—a fact which makes the target appear even more ambitious, since rates of growth in deep mining must inevitably be slower than in opencast. The centre for opencast activity is Liaoning Province, where the new multi-million tonne Fushun and Fushin mines are located.

Recently, China has joined the ranks of major coal exporters, ranks which are usually made up of the traditional coal exporting countries of South Africa, Australia, Poland and, of course, the U.S., in all of which countries strip mining accounts for a high proportion of output.

Indeed, it is largely because of the presence of strip mines coupled with, in the case of Australia and to a lesser extent South Africa, low domestic demand, which makes these countries major exporters in the first place.

Opencast mining, therefore, is manifestly more attractive to private capital than deep mining: indeed, in most countries, deep mining is carried on by the state. Even with environmental pressures, the lead times are shorter than in deep mining: the productivity is very much higher, the labour component low and, especially now, the returns for a skilful operator are virtually guaranteed.

In the UK, a variety of operators, many of whom are civil engineering contractors, mine the 13m tonnes of coal from the UK's strip mines.

Taylor Woodrow, Murphy, Shand, Simms, McGregor, Fairclough Parkinson, Costain and Crouch all find strip mining a profitable enough enterprise: and as the coal price has gone up in line with the oil price, it is likely to become more so. All of the contractors suffered low profits, or even losses, in the early seventies—largely a combination of fixed-price contracts and inflation—but the terms of the contracts have been changed, and the past three years have seen fortunes improve.

The contractual system in the industry works on a split between the National Coal Board and the private companies.

The NCB owns and supervises the sites, while the contractors, having agreed with the Board the amount of coal to be won over a certain period of time, wins the coal and sells it to the Board.

The operation of a site is a skilled operation, especially under today's rigorous health, safety and environmental standards. First, the overburden, or earth above the coal seams, must be scraped away, and stored on site in layers which can subsequently be relaid on the earth in the order in which it was removed. The task of removing the topsoil and the overburden is taken by the huge walking draglines—mechanised shovels on the end of long crane booms—which scoop up earth at as much as 200 cubic yards at a time. The draglines expose the coal seams for the smaller multiscrapers, which then work the seams, loading the coal on to a continuous chain of large dump trucks, varying in capacity from 30 to 85 tonnes.

Many sites have two- or three-shift working: the large investment in the machinery, and its comparatively short life, means that profitable working depends on more or less constant production.

Pollution

"Environmental pollution"—a new concept with which the contractor and the Board have to wrestle—means that noise and dirt must be kept to a minimum while the site is being worked, while the land must be restored as nearly as possible to its original form after working.

Noise is kept down by using the overburden as baffle screens round the site, and sometimes by planting fast-growing conifers round the edges: dirt is minimised by washing the coal and the trucks as they leave the site.

Thereafter, in concert with the Ministry of Agriculture, the site is restored for productive agriculture, a process which itself can take three years or more. There has recently been doubt expressed on whether or not it is possible to so replace the soil that it can be fully productive again: for the moment, there appears to be no resolution of these doubts. Both the Board and the contractors claim that, where the site worked has previously been waste ground, restoration actually improves the area.

J.L.

Power offers greatest potential

POWER GENERATION world-wide offers the greatest potential by far for the increased use of coal, for two major reasons: *first, it is now the greatest user* of coal already and second, it is very often under Government control, and *always under* Government influence, and thus is more readily responsive to perceived national energy priorities.

While the demand for steam (power station) coal in 1976 was 600m tonnes, it is likely to rise to 1.4bn tonnes in the year 2000.

It is of critical importance for *the future of coal* that public utilities be built for, or converted to, coal burning. But *energy policy* cannot be framed merely to safeguard the future of the coal industry (though *the world's coal industries* occasionally give the impression that it would be no bad thing *if they were*). *How far is an* increased use of coal necessary for the energy needs of the world in years *to come?*

The most authoritative recent answer to that question is to be found i na report published last year by the International Energy Agency of the OECD, called simply *Steam Coal*. It is on its figures and projections that the following argument is largely based.

First, as it notes, a number of "disturbing medium term trends" have been visible in the energy markets for some three years now. These were (to quote):

- The slowing in the delivery *of nuclear* capacity, thereby postponing significant substitution of oil.
- *The prospect that* the developing countries and the centrally planned economies might also require larger than expected oil imports.
- The likelihood that the principal oil exporting countries sometime after 1985 will produce less oil than assumed earlier.
- The probability that on a global basis potential excess demand under current trends would produce growing pressure on prices after 1985.

In considering how large a role coal would have to play in steam generation, the IEA study *took two reference cases*—a "low nuclear" and a "high nuclear," which, as their name suggests, were *pessimistic and* optimistic assumptions on the future growth of nuclear power.

Ambitious

Assuming a *low nuclear* growth of 7.9 per cent a year, it is estimated that coal use would have to grow, in the OECD countries, by around 900m tonnes in power generation alone, a rise of nearly 140 per cent, or a steady 6 per cent a year. Even in the high nuclear case, coal demand—growth of 9 per cent a year—is forecast to grow by around 750m tonnes in the OECD countries to the end of the century.

The IEA report comments that "the more than doubling of thermal coal use within 24 *years foreseen in the reference* case is, itself, an ambitious task which will require substantial *new investments in coal produc*tion, transportation and utilisation projects."

Yet even given the various national commitments to increase coal use and coal production—and these are by no means given—there is still an estimated "*energy gap*." (*An energy gap* is, of course, impossible in real life: supply and demand will always meet on the day. The concept as commonly used *is the assumed shortfall in* energy supply when users are extrapolated forward and when fuel is priced below high scarcity values.)

This gap—estimated to be as much as 8m barrels of oil a day by 1990, and 24m b/d by 2000, *assuming* in both cases the "high nuclear" case coupled with greatly enlarged coal pro*duction—can only be filled by* conservation measures, and possibly by bringing on stream alternative energy sources.

Thus, a fairly massive expansion in coal use is required even with an accelerated nuclear programme, greater energy conservation and possible use of wind, wave and solar power. Yet, as the IEA report comments, this perspective has by no means been adopted by the advanced countries, in part due, the report believes, to "an ebbing in public concern about medium-term energy problems, *promoted by the short-term* slackness in the world oil market arising from long-*developing new supplies* and lagging economic growth."

The report was completed, of course, *before the events in Iran* twisted oil prices up once more, and coal, whose attractiveness had faded, appeared desirable all over again to many. It remains the case, however, that much propaganda work on coal's behalf remains to be done.

This is much more the case in the West than in the East. In Eastern Europe, the Soviet Union and in China, coal-fired power generation is very much *the* rule, and coal supplies—in the USSR, China and Poland—are very substantial. Besides, none of the Warsaw Pact countries appear to have experienced substantial anti-nuclear protest movements of the kind increasingly familiar in the West. In the U.S. and in Europe, a number of entrenched interests will either fight against (or wish *to play down*) *increased use of* coal in power stations.

In the U.S., President Carter has called for greatly expanded use of coal in power stations as a major—perhaps the major—plank in his energy programme. The Government's policy is to double coal output by the end of the century.

However, though substantial problems surround this production target, even greater ones adhere to the transportation of coal, either through slurry pipelines or by rail: environmental objections, and the obtaining of wayleaves are major matters to be negotiated, and often cannot be.

*Since the U.S. nuclear pro*gramme has now ground to a halt, and oil-fired stations look *less and less attractive on cost,* it may be that environmental objections can be set aside when the choice is the *stark one of a* shortage of power.

In Western Europe, the division between the large producing countries of the UK and West Germany and the largely consuming countries is sharp. That division has been the main cause for there being no agreement within the EEC on a *package aimed at subsidising* the sales of European-produced steam coal, and of grants to build coal-fired power stations.

It seems more likely, however, than when the plan is re-presented to the Council of Energy Ministers later this year, it will meet with approval. The National Coal Board has recently estimated that passage of this measure could increase its market by between 3m and 5m tonnes annually.

Argument

The major reason why the steam coal subsidy plan has kindled little enthusiasm in the breasts of most EEC members is that, though they may not be averse to burning coal, they argue that they should be allowed to burn cheaper third country coal, available from Poland, Australia, South Africa, the U.S. and, now, China, which has recently contracted with the South of Scotland Electricity Board to supply 100,000 tonnes *of steam coal for Scotland's* power stations. Why, they argue, should they subsidise the sales *of dearer coal?*

It is an argument which attracts some sympathy from the *UK Central Electricity Generat*ing Board, which uses coal for 60-65 per cent of its generating needs. *It has made out a case for* a much higher proportion of imported coal than it is *currently allowed (between 1m* and 2m tonnes a year), basing its arguments on price, and assuring the NCB all the while that it will continue to take as much coal as the Board can give it.

It seems it has won part of its case: coal imports to UK power stations are likely to go up this year, if only because the supply of 75m tonnes, promised by the NCB, is unlikely to be fully met —but it will probably be constrained to order the coal on the spot markets, rather than take out long-term contracts.

The matter of imported coal, *an emotive one in* the UK, is unlikely to go away. As the IEA report stresses, trade in coal—*currently as low as 40m* tonnes among OECD countries —should grow, though not at the expense of *domestic industries*.

"An agreement between IEA member governments to ensure freer trade in coal would assist in promoting confidence in traders and investors in an unobstructed international trade," says the report.

It is likely that obstructions of various kinds will continue for some years: and the dream that it will one day rival the oil trade is likely to remain just that, largely because coal supplies are rather more evenly distributed than are oil supplies. *But it seems certain* that coal will be shipped about the world in much greater quantities than at present, and that the bulk coal carrier could be the ship of the future.

J.L.

Investment brings job security

FOR THE men who go below ground to dig coal, the change in the world's energy equation is having important consequences. This is particularly true in Britain, where trade union organisation is strong and an enormous investment programme for expanding and modernising the industry is under way. In the UK and in West Germany (the two largest of the European coal producers), it is a welcome change from the long years of closures during which the labour force has been cut by two-thirds or more.

Those who are left behind—some 240,000 in Britain, 180,000 in West Germany—are re-discovering the confidence and job-security that come with the *return of their strategic import*ance to the economy. For the first time in many years they can justify on purely economic grounds the kind of earnings status that their colleagues in the East European coal fields have long been accorded by the State.

In recent years, the impact of this change on the British National Union of Mine Workers has been very noticeable. Since the two national strikes in 1972 and 1974, which put the miners to the top of the industrial earnings league, the politics of the union have been tempered, first, by the readiness of the National *Coal Board to pay out large* extra sums of money in bonus in an attempt to boost output, and, second, by the union's close involvement in the investment programme, "Plan for Coal."

But a further consequence has been that union resistance to pit closure has stiffened. The miners are now demanding that they see for themselves whether *or not remaining reserves in the* condemned pits are really unworkable or uneconomic. It is *no longer enough for the NCB* to declare a pit redundant and shut the colliery gates. That has brought new problems for the NCB, which would like to concentrate its capital and skilled manpower in the economic mines—not least the new coalfields like Selby in Yorkshire and Belvoir in Nottinghamshire—and lop off the most outdated of its 223 pits.

Across the North Sea in West Germany, the stakes are not yet *so high. There, a more modest* production increase is envisaged —output this year is projected *to reach 87m tonnes*, compared with 88.5m tonnes in 1978. There is no suggestion by the big private coal companies that extra financial inducement to the workers is appropriate; nor, indeed, does the union appear to be pressing the loss-making *companies for a real economic* advance.

For the moment, the West German miner remains relatively poorly paid, especially when his higher cost of living is taken into account. The average wage of the miners in Germany's 42 pits is put at £130 a week, leaving them about seventh in the industrial table, *behind car workers, chemical* workers, and others.

In Britain, miners' earnings are put at over £100 a week on average, which gives them a place at or near the top of the league.

Output per man shift is high *in the Federal Republic*: 4.1 tonnes underground, compared with 3.3 tonnes in the UK. At *least in part that is a reflection* of the difference between the concentrated high-yielding collieries of the Ruhr and the very variable conditions encountered in Britain's scattered industry, which produces only one-fifth more deep-mined coal than Germany.

The extent to which the NCB is allowed to concentrate its own resources depends very largely on developments within the National Union of Mine *Workers. The bonus scheme,* introduced despite fierce resistance from the Left-wing, who *saw it as a retreat into the bad* old days of piece rates and pushed through by dint of some *fancy footwork by the moderate* majority of the union leadership, is meant to be even-*handed. That was the basis on* which it was sold to the union. A face worker on a cramped and *faulted seam is supposed* to be able to earn as much as one on a face where the coal comes out like butter. In practice, that is not happening, and the scheme is tending to advertise the very big gap between the most successful and the most unprofitable pits. That tends to strengthen the Board's *case for rationalisation*, but it *also tends to weaken the union's* readiness to co-operate.

For two years, bonus money has helped blunt the appeal of the militants trying to rouse the rank-and-file for big increases in basic wages. That effect seems to be waning.

At the union's last delegate conference, a claim for rises of up to 60 per cent on basic rates was adopted, and even the moderates said it was a justifiable response in the light of price inflation caused by the Conservative Government's first *budget, and in the light of the* economic importance of the miners themselves.

But another break on wage militancy remains. That is the union's commitment and dependence on the Plan for Coal. It needs to maintain a sufficiently *good working relationship with* the new Government to ensure that the investment programme *is not delayed or pruned back.* It was largely for that reason that Mr. Joe Gormley, the NUM President, changed his mind about retiring early.

In the wage negotiations that are about to begin, it would be surprising if the NCB, with a budget-conscious Government looking over its shoulder, does not stress the link between wage costs, investment, and rationalisation; and that could mean asking for the closure of *more older pits.*

A number of closures have been carried out in the past 12 *months, but the union's attitude* has hardened. Matters came to a head over the proposed shut-down of Deep Duffryn in South Wales. After the NUM threatened national industrial action in support of the Duffryn miners' case for a full trial of the remaining reserves, *the Coal Board had to back* down. Since then, the South Wales area director has asked the miners to accept closure of two other pits in return for a substantial investment at a third.

The Board may hope that this change of attitude is not entirely to its disadvantage. If the union is to become virtually *joint judge of the future of* loss-making pits, it may also become readier to co-operate in any wider rationalisation. For that, the Board would have to pay the price of extensive trials in cases where it now conducts only remote soundings. But what the miners will not accede to is the decimation of the old coal communities in Scotland, South Wales and the North-East, where most of the uneconomic pits are to be found.

The miners, meanwhile, will be making their own assessment, in a world of rising energy prices, about what constitutes an "uneconomic" pit. They could point to an unusual example from West Germany, where five years ago and for the first time in the industry's history the Federal and State Governments rescued a pit due for closure by its owners, the Preussag Conglomerate.

Over £25m was put up to underwrite bank loans that gave the Ibbenburen mine (now the deepest in Europe) a new lease on life, and saved the jobs of 4,200 workers. Ibbenburen, the last pit in the agricultural area north of the Ruhr, was saved on social grounds. It was and is the only big employer for 30 miles around. Now, with the pit just coming into profitability, that social decision has become justified on economic grounds as well.

Christian Tyler

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THE MANAGEMENT PAGE

EDITED BY CHRISTOPHER LORENZ

Sue Cameron examines the prospects for a new approach to customer-client liaison in the building industry

ICI's 'band of hope' may herald an end to late construction projects

ONCE UPON a time a company called Imperial Chemical Industries decided to improve on the Rumpelstiltskin process for turning straw into gold by building two great plants that would turn naphtha into ethylene.

One of the plants — ethylene is used in the making of plastics —was to be built at Corpus Christi in Texas and the other at Wilton on Teesside, in North East England. ICI drew together a single management team to oversee construction on both sides of the Atlantic and one fine day, when all was ready, the mighty work began.

Now we come to the sad bit. One of the plants was finished on time and on budget: the other had still not come on stream more than two years after its scheduled completion date and during that time its costs soared from £100m to £200m.

There are no prizes for guessing which plant was where.

During recent years the British construction industry has acquired a notorious record for lateness in building major plants. The additional time and money involved in putting up a plant in the UK—as opposed to a Continental country or the U.S.—has become a major consideration for international companies making investment decisions.

Hitherto most of the blame for the lengthy delays has been placed squarely on the site workers themselves and on the industry's poor industrial relations. Disunity among employers' groups and separate pay structures were said to give men endless opportunities to go slow or go on strike: the men in turn were accused of taking every chance to procrastinate so as to stretch out their periods of employment in an insecure and cyclical industry.

Nowhere have the delays been longer or the problems more acute than on Teesside. The UK chemicals giant has been only one of many companies that have suffered—a new plant built for the U.S.-based Monsanto group was completed well over a year late. Both companies have spoken out against the construction industry's poor performance—with little result in terms of improved efficiency.

But four years ago, when the problems with its ethlyene plant were starting to emerge, ICI's engineering services section at Wilton called together a number of contractors with the aim of exchanging views and ideas. The group became known locally as "the band of hope," and turned into a broader attempt to analyse some of the day to day causes of construction delays.

The analysis produced some striking yet commonplace findings, which are now being used as the basis of a new management approach to another ICI project—the building of a terephthalic acid plant.

The plant is also being built at the Wilton complex on Teesside, and one of the main contractors is the William Press construction group. Those involved have high hopes that, this time, the work will be finished on schedule and without any dramatic escalation of costs.

Opportunities denied

What managers at ICI and William Press discovered when they sat down and took an objective look at the whole issue was that all too often construction workers were denied the opportunity to get on with the job. The ways in which this could happen—and had happened on many sites—read like a manual on how not to manage a building project.

There were instances of thousands of men being brought on to sites in Teesside before proper access roads had been completed: in some cases adequate access roads and site entrances were never built at all, with the result that workers had to queue in traffic jams for hours—literally—each morning and evening.

When the men finally arrived on site they sometimes found the necessary materials had not arrived for them to do their jobs; on other occasions a single piece of building would have to be pulled down and put up again—perhaps several times—because of last minute design changes.

Working conditions like these make delays inevitable. Mr. George Morrison, area manager of the William Press North East operations centre, says they are also bound to make people frustrated and it is therefore not surprising that men sometimes decide they are "going to work comical." He claims it is unfair to place all the blame for poor performance on site workers—in the past there have been faults on all sides.

Clients—such as the big chemical companies—can also contribute to construction delays and increased costs, says William Press. It is they who are responsible for late modifications to plant designs and sometimes for major, last minute changes of plan, such as a sizeable increase in production capacity.

It also tends to be client companies which press for an increase in the workforce once it becomes clear that building has fallen behind schedule. They argue that more men will be able to complete work more quickly and lost time will therefore be made up. But if materials and drawings are missing, if changes are being made to initial designs, then the appearance of substantial numbers of extra people tends merely to add to the confusion. It certainly adds to the cost.

Add to all these difficulties a run of bad weather—bringing certain types of work to a halt on safety grounds—and it becomes easier to understand why the UK construction industry so often fails to deliver on time and on price.

What ICI and William Press are trying to do over the building of the terephthalic acid plant is to ensure that everything—roads, site offices, drawings, building materials—is ready before any construction workers are brought onto the site. As management plans go, it all seems straightforward and obvious enough—indeed blindingly so—and the question therefore arises as to why it has not been tried before.

Initial cost higher

ICI and William Press say one reason is that it requires "enormous courage." They claim the pressures and temptations to bring in men and make a start—even though access roads are incomplete and only some of the materials are on site—are hard to resist.

For one thing the costs are much higher than usual during the initial stages of a project. Yet during the first months of a building programme there is—literally—nothing concrete to show for the extra money being spent.

This can lead to demands for a return to traditional practices—notably from senior people in a client company who are not connected with the day to day business of construction and who cannot understand why this particular plant appears to be costing so much more and yet taking so much longer to build.

The industry has historically been date oriented—construction schedules have called for site clearance to be completed by "Day 10" or for pipework to be started on "Day 24" —and traditional methods of operating often die hard. What is more, planning by the calendar is often successful when it comes to building small or medium sized plants. It is the bigger projects that are hardest hit by lateness and by vastly increased costs.

Another factor is that the amount of additional work involved in "giving people the opportunity to get on with the job" is considerable. At the site of ICI's new terephthalic acid plant every drawing, all materials and every piece of equipment is being meticulously checked to ensure that it needs no correction or modification.

Much of the fabrication for the new plant is being done off the site and undercover. The aim is to avoid the delays to open air work that are caused by bad weather and to speed up the time spent on construction proper. However, some of the parts being fabricated off-site have not been delivered punctually and this has led to hold-ups.

On the plus side, the detailed preparations for building the plants have enabled William Press to spot ways of cutting costs. ICI managers, for example, had expected that one particular task would require the use of two 150 ton cranes but now a way has been found of doing the lift with only one, thereby halving the hire charge.

ICI, which is giving the experiment its full backing, believes it could save as much as 20 per cent of its costs if the new approach to construction management proves successful. But neither the chemicals giant nor William Press is banking on plain sailing all the way.

One of the trickier issues facing the two companies is the question of late design changes. William Press claims that in the past these have been a major cause of delay.

It says new chemical plants are rarely revolutionary in design: they are nearly always based on existing production processes with the addition of certain improvements and modifications that have been suggested by practical experience.

William Press's complaint is that good ideas for improvement are emerging all the time and some client companies make a sporting attempt to incorporate all of them in each new plant design. The result is that building completion dates have perforce to go by the board.

"Clients should accept some built-in obsolescene," the construction group says. "They shouldn't be allowed to inject preferences into a design, after a certain point, only real needs. Sometimes they should even be prepared to wait until a plant is finished and then make modifications to it—this could be cheaper in the long run.

"On the other hand, we don't appreciate the full commercial implications of the design changes that are made at a late stage. We cannot tell when the extra cost and time may be justified by the opportunity to take an extra slice of the market." ICI takes the view that it must be able to introduce any late design changes that it feels to be necessary—but the group admits there is room to cut the number of late changes made.

Happy ending doubts

The 250,000 tonnes a year terephthalic acid plant—terephthalic acid is used as an intermediate in polyester fibre production—is scheduled to cost £90m and is due to be finished in August next year. ICI and William Press say they will know in March whether or not the plant will be completed on time, but they are hopeful that it will be.

Yet neither company is prepared to say for certain that the story will have a happy ending. They point out that other new methods of tackling construction management on Teesside have been tried and have failed or been only partially successful—despite confident predictions that they were bound to work.

William Press and ICI content themselves with saying that the approach they are trying now at least strengthens their chances of living happily ever after.

BUSINESS PROBLEM — BY OUR LEGAL STAFF

Preference shares

We own a small private company and we are proposing to sell the ordinary shares. The issued capital also includes £1,000 of preference shares. As there is no provision in the articles for them to be redeemed, do we require to go to court for approval to repay them?

You would have to make an application to the Court to sanction a scheme if there is no provision for redemption either in the articles of association *or in the terms of issue of the preference shares*; provided that Article 3 of Table A has not been excluded from the articles of association.

No legal responsibility can be accepted by the Financial Times for the answers given in these columns. All inquiries will be answered by post as soon as possible.

Call for simplified employee protection

BIG COMPANIES defending claims for unfair dismissal in an industrial tribunal often spend £1,500 to £2,500 to stop the applicant getting £500, according to a report prepared by Incomes Data Service and published last week.

But dismissed employees do not flock to the tribunals, notes the extensive study on "The Real Cost of Dismissal." Tribunals are only used by a minority, "a modest one at that," it comments. "Leaving aside the question of small businesses, we cannot paint a picture of industry groaning under an insuperable burden from unfair dismissal."

The report goes beyond the simple costs of awards and legal fees to examine the broader area of the costs to companies in training personnel and of changing procedures to meet legislative requirements, and also the costs involved in actually challenging an unfair dismissal claim.

Overall, the authors consider that none of the costs they managed to uncover were excessively expensive, even when lumped together, "when set against the principle that employees should not be dismissed for an unjust cause without compensation; particularly when ranged alongside some patent benefits that employment protection and its legal machinery have brought to British industry." But the protection system should be simplified, says the report.

Ironically, perhaps, the report does note that the employers surveyed—and all of them were major companies—said their prime worry was of being stigmatised as unfair. "To them compensation for unfair dismissal was an irrelevance. What they hated was being branded unfair."

None of the companies questioned could put a price on the costs of training in response to the employment laws, but apparently the normal reply was that it was "stupendous" or plain "enormous."

An unquantifiable, but considerable element of cost resulted from a range of increasing burdens for management. "The most frustrating of these is the time management loses from dealing with other urgent tasks to supervise or keep careful records on each employee, investigate dismissal facts and prepare for conciliation hearings. Few companies have tried costing this, but if they did, it is doubtful whether they would include the personal irritations and frustrations these matters inflict on an already busy management."

Britain's employers have more reason than many advanced countries to despair of the legal tangles that surround them when they try to sack their employees, says the report. "Fifteen years of piecemeal statutory intervention, grafted onto the common law contract between employer and employee, have produced a complexity in law, procedure and costs to companies and public that far outweighs the modest gains accruing to employees."

It should be possible to make the protection process cheaper and simpler, and to have fewer tribunal hearings, by introducing certain procedural and organisational changes. One of the main criticisms occurring through the study stems from the over-centralisation of the structure of the industrial tribunal system itself in England and Wales.

In addition, it says things would be easier for all concerned if difficult jurisdictional questions were sorted out before the "unfairness" hearing; if tribunal hearings went faster and more relevantly to the real issues; and if tribunal chairmen took a more vigorous part in them. "And at the same time, we have to try and do better, keeping weak or wrongly-based claims out of the tribunals altogether."

Radical

As a more radical solution the authors display some enthusiasm for the system operating in Israel, which is not dissimilar to Britain's own redundancy payment scheme. The burden of proof remains firmly on the employers in Israel, but the system does get away from the concept of "unfair" dismissal, says the report.

"It is replaced by a severance payment which is made to all those who are dismissed, and to some others besides who are deemed to be dismissed by the law. Employers are given a chance to prove that employees, by their conduct, have disentitled themselves to a payment. If a court hearing becomes necessary there is an inquisitorial system, with the court taking a very active role and the judge sorting out all the (legal) issues beforehand. Severance pay in Israel is roughly the same sort of amount employees would expect to get were they to succeed in an unfair dismissal application in Great Britain."

The Real Cost Of Dismissal, An International Management Report published by the Financial Times and prepared by Incomes Data Services. Price £75.

Jason Crisp

Kenneth Gooding on a study of the UK motor industry's future

Autos overtaken by events

YOU have only to read Professor Krish Bhaskar's new book, "The Future of the UK Motor Industry" to understand how quickly the automotive industry has been changing. Indeed, Professor Bhaskar admits that he was warned that anything he might write would be overtaken by events.

Nevertheless he pressed on, only to be caught on the hop by the takeover of Chrysler Europe by Peugeot-Citroen of France; he has added a hasty chapter which reads as if he could hardly believe the deal would go through.

Nor is there any mention of the potential manufacturing link betwen BL and Honda of Japan, a deal full of potential to say the least.

Recent decisions about expansion of European car-making capacity by Ford and General Motors also came too late for the book.

But these matters of detail should not detract from Professor Bhaskar's argument that, as a matter of urgency, the government should determine just what kind of motor industry should be established in the UK and now that industry should be run.

He points out that government action to date has primarily been taken in reaction to crises. He also stresses that any government interested in maintaining employment levels cannot really expect to become a profitable, self-financing concern operating in accordance with traditional commercial criteria.

In Europe, Renault of France and Alfa-Romeo of Italy have set aside orthodox commercial criteria and operate within much broader constraints. Renault, for example, is expected only to break even and to make some contribution to the balance of payments and employment in France. Even West Germany's motor industry has, in Professor Bhaskar's words, "been tainted by unnatural forces"—possibly a reference to the 20 per cent government holding in Volkswagen.

It may be impossible for weaker companies in the UK, still profit-oriented, to compete with healthier industries in Europe which do not have to respond to commercial, profit-making criteria.

Professor Bhaskar insists that what the UK industry now needs is "policy continuity and consistency, so that investment can anticipate requirements with greater confidence. BL must be revitalised as a matter of urgency. And if redundancies are inevitable, new job opportunities must be created to take up the surplus labour."

The Government should take into account the fact that the four major UK-based automotive companies are in direct competition, when providing support for them, he says.

"A viable industrial strategy could foster a level of competition within a national policy framework that is to the benefit of the UK as a whole rather than in the interests of individual companies."

Here again his timing lets him down. It will take a better-argued, less-repetitive book than this (472 pages and no index) to convince Mrs. Thatcher and Sir Keith Joseph that massive intervention is the way to solve the UK automotive industry's problems.

"The Future of the UK Motor Industry" by Krish Bhaskar, Kogan Page, £12.50.

LOMBARD

God protect me from my friends

BY SAMUEL BRITTAN

DEFENDING Government policy—or authority of any kind—does not come easily to me. Nevertheless, a policy which is condemned by employers, trade unionists, bankers, political advisers and middle-of-the-road commentators alike, is unlikely to be wholly bad. I refer, of course, to the Government's monetary, fiscal and exchange rate stance. Doing the *opposite of what these critics say* is often a first, if not wholly reliable, approximation to sound advice.

The greatest threat to the present economic strategy is not the opposition of the TUC or the alternatives offered by the Labour left.

The really dangerous siren voices come from people who have rarely voted anything other than Conservative and who are socially, politically and personally close to the Government.

There are the commentators who say that monetary restraint is pushing Britain into an unnecessary deep recession; the *political friends who ask if "Geoffrey's" budgetary restraint is not being overdone*; the industrialists who make tough-sounding noises about the miracles of productivity and profitability they could achieve if only they were not being hit by a "crazy" exchange rate; the other industrialists who *complain that industrial gas prices are "impossibly" higher than their competitors have to pay (they might as well say that their wages are impossibly lower).*

On top of this come all the people who because they grew up in a world of cheap money and low inflation think that 14 per cent lending rates are horrifyingly high instead of being the bargain basement they really are.

Chancellor

It would be welcome, although out of character, if all these conveyors of bad advice were sent packing by the Chancellor with the slogan: "God protect me from my friends; I can take care of my enemies." The advice that is being offered on *many sides is well characterised* by the following quotation from the GATT Report on 1978-79, the outline of which was published in Geneva today. "Accommodation of exogenous tion in the foreign exchange market, failure to reduce the public budget deficit and similar signals sent by public policy only strengthen the expectations of future inflation and make the eventual victory over it unnecessarily costly."

But to come back to the domestic scene. Just as it was fortunate for national stability that the doubling of unemployment took place under a Labour government, it is also fortunate that the present pressures on corporate liquidity are taking place under a Conservative *administration. If such a* squeeze were occurring under Labour, the hysteria would be unbearable. The Conservative personal tax cuts have for the time bribed the business world into acquiescence; but the murmurings are getting louder all the time.

How about the criticism that the *government is mistakenly* trying to reduce public sector borrowing without allowing for a forthcoming recession? It is just possible that in 1980-81 fiscal policy might be too tight. The way to avoid this is simply to base PSBR estimates on some trend growth rates and not on Treasury short term forecasts. But the *present reality is that* banks and their customers are taking advantage of all the gaps in the official definition of money—and no definition can be comprehensive—to put more credit into the system than the official M3 figures suggest. Business activity is higher than the forecasters expected and the *recession is later in coming.* Most of the objectors to government policy do not have in mind anything like the medium term strategy proposed by the London Business School, but simply want to abandon monetary control as soon as the going becomes difficult.

Credibility

I should fail any member of a class in monetary theory who could not find half a dozen good reasons for the once for all increase in the money supply to take into account a great variety of special factors. But *I should equally fail any practical statesman who thought in* the light of past history that *we could act on any one of these* reasons without shattering the wafer-thin credibility about future intentions on which—far more than anything technical—depends the success or failure of the present experiment in monetary control.

Implications of a North Sea accident

THE WEEK IN THE COURTS

BY JUSTINIAN

WHEN A ROUSTABOUT on an English-owned oil-drilling rig off the Dutch coast was injured in June, 1976, as a result of an accident, and made a claim on the UK national insurance authorities, it could hardly have been foreseen that it would involve issues touching the very heart of the benefits of North Sea oil. But the question whether he had suffered an "industrial accident," entitling him to industrial injury benefit, depended where the accident occurred.

The worker was employed by a company with its registered office in Great Yarmouth. At the time of the accident, the rig, The Key Gibraltar, registered in Panama, was resting on the Dutch continental shelf outside Dutch territorial waters and operating under a licence from the Dutch government. It had been fitted out on Clydebank, where the worker had joined the rig, and was towed to its site off the Dutch coast. After the accident it moved to a site off the West German coast.

The rig was a "self-elevating drilling unit, being a platform without propulsion." The platform was triangular, supported when working by three square truss legs on which it could be raised above the sea surface. At the time of the accident its legs rested on the sea bottom, 3.55 *nautical miles from low-water* mark off the coast of Holland. Although outside what are claimed as territorial waters by the Dutch government, it rested on a part of the continental shelf over which Holland, as a member-state of the EEC, exercised sovereign rights.

The *rig spent rather more* than half the insurance accounting year in designated areas of the UK sector of the Continental Shelf of the North Sea. Section 50(5) of the Social Security Act 1975 provides that Continental Shelf workers and others in similar employment are not entitled to industrial injuries benefit in respect of an accident happening while the earner is *outside Great Britain.* The primary question for the insurance authorities was, therefore, whether the roustabout could point to any Community law provision that override the restriction on payment of UK insurance benefit, and thereby ensure that the accident was an industrial accident as defined as an accident that arises out of, and in the course of employment, other than in the case of an accident occurring outside Great Britain.

Rights

The first question was whether an accident occurring on an oil rig operating in the UK's sector of the Continental Shelf was to be treated as if it occurred on British soil. The Continental Shelf Act 1964 was passed to make provision for the exploration and exploitation of the Continental Shelf. It vested in Her Majesty any rights exercisable by the UK outside territorial waters with respect to the seabed and sub-soil and natural resources. By Orders in Council, designated areas can be declared in which those rights are exercisable. If the accident in the Dutch sector of the Continental Shelf was to be treated as if it occurred on Dutch soil, then the question was whether Community law helped the claimant get over the restriction on payment of industrial injuries benefit for accident outside Great Britain.

Earlier this year Mr. J. G. Monroe, the National Insurance Commissioner, referred certain questions to the European Court at Luxembourg before he could decide the claim*. All the questions on certain provisions of EEC social security law depended on the fundamental question whether that part of the Continental Shelf where a person is employed on a rig or other installation engaged in the exploration or exploitation of seabed mineral resources, which is regularly moved from one sector to another over which member-states purport to exercise their rights, should be treated as if the territory of the littoral state. Hence the importance of determining what precisely are member-states' rights to the Continental Shelf.

The problem lies in the lack of precision in the Continental Shelf concept. Economic necessity, rather than legal principle, has been the generating impulse of the doctrine, and contiguity or geographical proximity has been the usual test for establishing the limits within which economic considerations will be permitted to operate. The appropriate test of the Continental Shelf has been that of actual subjection of the area to the control of the state off whose shores the shelf lies. At the Geneva Conference of 1958 it was agreed that the shelf, to a depth of 200 metres (or beyond, where the depth of the superjacent waters admit of exploitation) was subject to the sovereign rights of the littoral state for the purpose of exploitation of natural resources, and no one might make a claim to another's shelf. A state may thus assert jurisdiction over its shelf without ever having claimed it.

'Ragged'

The recent European Court announcement that the case of *Stephen Filby v. Insurance Officer (8/79)* has been struck off from its lists suggests that Mr. Filby has been persuaded to settle his claim with the insurance authorities because the Government is not particularly desirous that the European Court investigate the topic of the Continental Shelf which presents an appearance of "ragged ends and unfilled blanks"; rather that the issue should be thrashed out, however protractedly, within the councils of the United Nations currently sponsoring the Law of the Sea conference, first in Venezuela and now in New York.

*Re the Key Gibraltar Oil Drilling Rig [1979] ICMLR 362.

War Legend Pontefract prospect

RACING

BY DARE WIGAN

ILE DE BOURBON'S defeat by Cracaval at Kempton on Saturday, albeit by a narrow margin, may be interpreted in several ways. It cannot, however, be reasonably disputed that the absence of Ile de Bourbon from a race course since winning the Coronation Cup at Epsom on June 9 placed him at a disadvantage with his conqueror, for Cracaval ran at Epsom the previous day when Hills' colt had finished eighth behind Troy in the Derby.

Moreover, Fulke Johnson-Houghton, the trainer of Ile de Bourbon, was apparently entirely satisfied with the condition of his colt. With Barry Hills undecided about whether to run Cracaval in the St Leger next Saturday, betting on the race has been suspended by most bookmakers.

Although Johnson-Houghton was bitterly disappointed by the defeat of Ile de Bourbon a measure of consolation was forthcoming from Haydock where Double Form, Geoff Lewis' last mount before setting up as a trainer, won the Group Two Vernons Sprint Cup by three lengths from Ahonoora, with Devon Ditty in third place.

The quality of today's racing at Windsor and Pontefract is not of a high order. Henry Cecil, however, has despatched the *useful War Legend to* Pontefract for the Fern Hill Stakes (4.15) and this colt by the successful French sire, Caro, is likely to give stable jockey, Joe Mercer, another winner in his bid to stave off the persistent challenge of Willie Carson in the race for the jockeys' championship.

War Legend, who finished a creditable fifth carrying 8 st 13 lbs in the *King George V Handicap at Royal Ascot*, is no stranger to Pontefract, having out-classed a solitary opponent over the distance on the same course last month; and though Majestic Maharaj will challenge him this afternoon, he is a reasonably confident selection, as is Tribal Eye for the Wentworth Handicap (4.45).

Carson will be at Windsor where his best prospect may be Smoke Screen in the Park Lane Handicap (3.30)

WINDSOR

2.30—Kilroyale

3.00—Baxter's Green

3.30—Smoke Screen*

4.30—Haddfan

PONTEFRACT

4.15—War Legend***

4.45—Tribal Eye**

5.15—Plum Run

Guide to the self-employed

IN SPITE of financial pitfalls, more workers are becoming self-employed, according to the Consumers' Association, which today published a practical guide to working at home.

The guide explains about planning permission for changes of house use, insurance, neighbours, naming the business, getting customers and costing work, keeping accounts, and dealing with tax.

Earning Money at Home, Consumers' Association (£2.95).

Pacific Crest charity walk

THE TREACHEROUS Pacific Crest Trail from the Mexican border to Canada may soon be conquered by three young Englishmen in aid of the Cancer Research Campaign.

Andrew Marsh, 22, his brother Martin, 20, and Peter Jackson aged 21, all from Maidstone, Kent, will be the first people to attempt the 2,650 mile walk in winter. They leave for America on Saturday and hope to complete the trail in nine months raising money from sponsorship for the campaign.

Massey tractors for Sudan

BY ALAN DARBY IN KHARTOUM

THE FIRST consignment of agricultural equipment being supplied under a $1.8m (£800,000) contract signed in May between Massey Ferguson of Britain and its Sudan distributor, the Government-owned May Engineering Corporation, has begun arriving in Khartoum.

The total order, the balance of which is now at Port Sudan, comprises 100 of Massey Ferguson's latest series tractors from Coventry and two demonstration model combined harvesters fitted with a special device for harvesting small seed crops, such as lucerne and clover.

The company, which claims to hold 48 per cent of Sudan's tractor market, has been doing business here for 30 years, a factor which has enabled Massey Ferguson to obtain ECGD cover for the order now being supplied.

Massey Ferguson's representative for Egypt and Sudan, said his company remains optimistic about the long-term market potential of Sudan.

Press Council chief replies to Goldsmith

MR. PATRICK NIELL, QC, chairman of the Press Council, has responded to an open letter sent to 120 MPs by Sir James Goldsmith.

Sir James's letter said the Press Council had been unwilling to formulate general principles of conduct for the Press, except under political pressure.

Mr. Niell has suggested that Sir James appears to be impugning the integrity and impartiality of the council's lay members.

TV/Radio

BBC 1

† Indicates programme in black and white

6.40-7.55 am Open University (Ultra high frequency only). 12.45 pm News. 1.00 Pebble Mill at One. 1.45 Trumpton. 3.05 Home on Sunday. 3.53 Regional News for England (except London). 3.55 Play School (As BBC 2 11.00 am). 4.20 A Dog in Paris. 4.35 Battle of the Planets. 5.00 John Craven's Newsround. 5.05 Blue Peter. 5.35 Noah and Nelly in Skylark.

5.40 News.
5.55 Nationwide (London and South East only).
6.20 Nationwide.
6.55 Angels.
7.20 The Rockford Files.
8.10 Panorama.
9.00 News.
9.25 The Monday Film: "That'll Be The Day" starring David Essex and Ringo Starr.
10.55 Film 79.
11.25 News Headlines.
11.27 Alone.
12.00 Weather/Regional News.

All Regions as BBC 1 except at the following times:—

Scotland—5.55-6.20 pm Reporting Scotland. 12.00 News and Weather for Scotland.

Wales—1.45-2.00 pm Pili Pala. 5.55-6.20 Wales Today. 6.55-7.20 Heddiw. 7.20 Angels. 7.45-8.10 Ask the Family. 12.00 News and Weather for Wales.

Northern Ireland—3.53-3.55 pm Northern Ireland News. 5.55-6.20 Scene Around Six. 12.00 News and Weather for Northern Ireland.

England—5.55-6.20 pm Look East (Norwich); Look North (Leeds, Manchester, Newcastle); *Midlands Today (Birmingham)*; Points West (Bristol); South Today (Southampton); Spotlight South West (Plymouth).

BBC 2

6.40-7.55 am Open University.
11.00 Play School.
4.50 pm Open University.
6.55 Genetics and Society.
7.20 Mid-Evening News including sub-titles.
7.35 A Diary of Britain.
8.15 The Two Ronnies.
9.00 Alec Guinness in "Tinker, Tailor, Soldier, Spy."
9.30 50 Years of Country Music.
10.40 Jack High: The Kodak Masters Bowls Tournament.
11.15 Late News.
11.30 Closedown.

CHANNEL

Channel is the only IBA company transmitting programmes during the present industrial dispute. Details of this local service are given below.

1.20-1.30 pm Channel News, What's *on Where and Weather*. 5.00 Puffin's Birthday Greetings. 5.05 Kum Kum. 5.30 Beverley Hillbillies. 6.00 Report at Six Extra. 7.00 Al Oeming. 7.30 Cash and Company. 8.25 The Feature Film: "The Ambushers." 10.10 Channel Late News, Weather. 10.15 Risko. 11.05 French News.

RADIO 1

(S) Stereophonic broadcast

5.00 am As Radio 2. 6.00 Dave Lee Travis. 9.00 Peter Powell. 10.00 Simon Bates. 11.31 Peter Powell. 2.00 pm Andy Peebles. 5.30 Newsbeat. 5.45 Kid Jensen, Special. 8.00 Mike Read. 9.50 Newsbeat. 10.00 John Peel (S). 12.00-5.00 am As Radio 2.

RADIO 2

5.00 am News Summary. 5.03 Tony Brandon (S). 7.32 David Allan (S). 10.03 Jimmy Young (S). 12.15 pm Waggoners' Walk. 12.30 Pete Murray's Open House (S). 2.15 David Hamilton (S). 4.15 Much More Music (S). 5.00 News. 5.05 Waggoners' Walk. 5.20 John Dunn (S). 6.45 Sports Desk. 7.02 Music from the Movies (S). 7.30 Alan Dell with The Dance Band Days, and at 8.02 The Big Band Sound (S). 9.02 Humphrey Lyttelton with The Best of Jazz on records (S). 9.55 Sports *Desk. 10.02 Town and Country.* 10.30 Star Sound. 11.02 Peter Clayton with Round Midnight, including 12.00 News. 2.02-5.00 am You and the Night and the Music with Patrick Lunt (S).

RADIO 3

‡6.55 am Weather. 7.00 News. 7.05 Overture Concert, part 1 (S). 8.00 *News.* 8.05 Concert, part 2. 9.00 News. 9.05 This Week's Composer: Mily Alexeievich Balakirev (S). 10.00 Guarneri String Quartet (S). 11.10 The *Shopkeeper's Mirror* (S). 12.00 Bournemouth Symphony Orchestra concert, part 1 (S). 1.00 pm News. 1.05 Bournemouth SO, part 2 (S). 1.50 17th-century Spanish Organ Music (S). 2.30 Matinee Musicale (S). 3.30 New Records (S). 4.45 The Tisseran Harpsichord of 1710 (S). 5.25 Homeward Bound (S) including 5.45-5.50 News (‡ *and mono only from 5.45*). ‡6.15 At Home. 7.10 Pied Piper (S). 7.30 Proms 79 from St. Augustine's Church, Kilburn (S). 8.45 Poet News USA. 9.30 Proms 79 from the Royal Albert Hall, part 1: Berio, Marcland (S). 9.55 Conversations in New Orleans by John Stevenson (reading). 10.15 Proms 79 part 2: Birtwistle (S). 11.05 *Granados* (S). 11.25 Jazz in Britain: Graham Collier Music (S). 11.55-12.00 News.

VHF only—6.00-7.00 am and 5.45-7.10 pm Open University.

RADIO 4

6.00 am News Briefing. 6.10 Farming Week. 6.25 Shipping forecast. 6.30 Today, including 6.45 Prayer for the Day. 7.00, 8.00 Today's News. 7.30, *8.30 News Headlines, 7.45 Thought for* the Day. 8.45 The Crock of Gold. 9.00 News. 9.05 Start The Week with Barry Norman. 10.00 News. 10.05 Wildlife. 10.30 Daily Service. 10.45 Morning Story. 11.00 Roger Cook Reports: Rock Bottom—The record business. 11.45 Listen With Mother. 12.00 News. 12.02 pm You and Yours. 12.27 Brain of Britain (S). 12.55 Weather; programme news. 1.00 The World at One. 1.40 The Archers. 1.55 Shipping forecast. 2.00 News. 2.02 Woman's Hour. 3.00 News. 3.05 *Afternoon Theatre* (S). 4.35 Story Time. 5.00 PM News magazine. 5.50 Shipping forecast. 5.55 Weather, programme news. 6.00 News. 6.30 I'm Sorry I Haven't a Clue (S). 7.00 News. 7.05 The Archers. 7.20 From Our Own Correspondent. 7.45 The Monday Play (S). 9.00 Reflections, by Mari James of Llangeitho. 9.30 Kaleidoscope. 9.59 Weather. 10.00 The World Tonight. 10.30 The News Quiz (S). 11.00 A Book at Bedtime. 11.15 The Financial World Tonight. 11.30 Music at Night (S). 12.00 News.

BBC Radio London

5.00 am As Radio 2. 6.30 Rush Hour. 9.03 London Live. 12.03 pm Call In. 2.03 206 Showcase. 4.03 *Home Run*. 7.03 Black Londoners. 8.00 Breakthrough. 10.00-5.00 am As Radio 2.

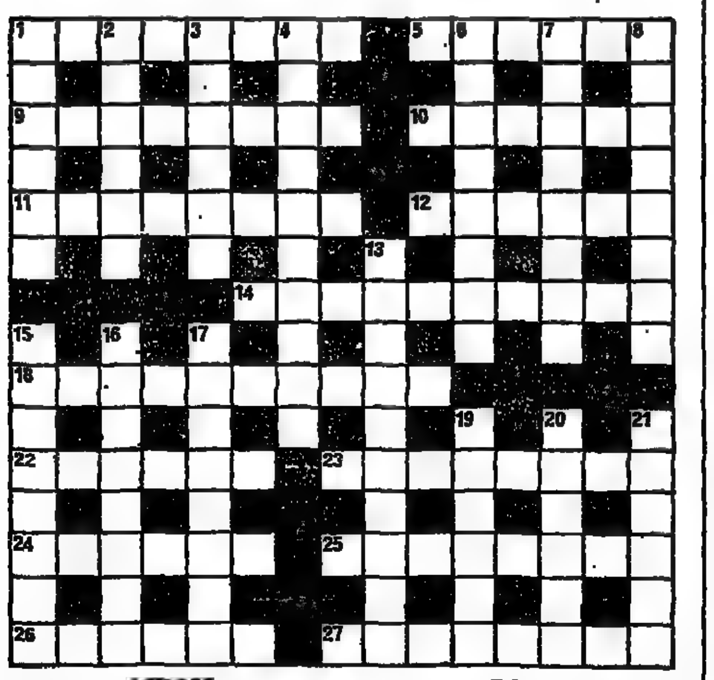
London Broadcasting

6.00 am *AM* with Bob Holness and Doug Cameron. 10.00 The Brian Hayes Show. 1.00 pm LBC Reports. 3.00 George Gale's 3 O'clock Call. 4.00 LBC Reports. 8.00 *After Eight Special*. 9.00 Nightline. 12.00 LBC Reports Midnight. 1.00 am Night Extra. 4.00 *Monty at Large*. 5.00 Morning Music.

Capital Radio

6.00 am Graham Dene's Breakfast Show (S). 9.00 Michael Aspel (S). 12.00 Dave Cash (S). 3.00 Roger Scott (S). 7.00 London Today (S). 7.30 "Prudence." 7.45 Ric Davis's Open Line (S). 9.00 Nicky Horne's Your Mother Wouldn't Like It. 11.00 Tony Myatt's Late Show (S). 2.00 am Night Flight.

F.T. CROSSWORD PUZZLE No. 4,069



ACROSS

1 Tea (China) for the Prince (8)
5 Extra large flag for an ancient god (6)
9 To expose scandals is a dirty business (4-4)
10 The place for a tea-party (6)
11 To win a title you can put up with her (8)
12 Expresses the maximum aboard (6)
14 Seeing how far you can go at the tailor's (6, 2, 2)
18 Remaining in the Civil Service a short time can cause a dilemma (5, 5)
22 Weight is about to finish the ligament (6)
23 The animal for a lean poet possibly (8)
24 "Chaste as the —— that's curdied by the frost" (Coriolanus) (6)
25 Publication from the South causes insurrection (8)
26 *Listen on board the cutters* (6)
27 "Think you I am no —— than my sex" (J.C.) (8)

DOWN

1 Good-looking but bashful about the blasted elm (6)
2 Stress may give away your place of origin (6)
3 Ramble round a capital arch (6)
4 TRUNK DEATH. Read about the stark reality (5, 5)
6 *Obstruction* causes messenger to come to a halt (8)
7 Withdraws the sappers round the region (8)
8 Give a couple of numbers in prison (8)
13 Lack of satisfaction to record on canvas (10)
15 Tax restrictions for dogs (8)
16 Poor experience associated with Greenwich (4, 4)
17 A good man has a wave for one taking a walk (8)
19 In a short time Ireland can produce wool (6)
20 Tennis champion gets round in tedious result (6)
21 A note from a voice we hear (6)

The solution of last Saturday's prize puzzle will be published with names of winners next Saturday.

Structure plans accelerated

THE DEPARTMENT of the Environment is accelerating the processing of local authority *structure plans*, said Dr. Wilfred Burns, chief planner, at the Town and Country Planning summer school in York yesterday.

He told 1,000 senior town planners and councillors that local authorities were to be criticised for spending too long on submitting the proposals.

Race relations warning

BRITAIN is in danger of being blinded to the real problems of race relations, by a "manic preoccupation with immigration" it was claimed yesterday.

Mr. David Lane, chairman of the Commission for Racial Equality, said in Nottingham: "The public have not fully accepted the fact that Britain is black and brown and yellow as well as white, and that the ethnic minorities are here to stay."

THE ARTS

Royal Academy

The Horses of San Marco

by COLIN AMERY

IT IS a wonderful sight to see the great bronze horse from St. Mark's standing proudly in the Royal Academy. It is superbly displayed in an exhibition that has been generously sponsored by Olivetti and designed by Alan Irvine. Few horses can have seen so much of the world as this and its three stable mates. They started their lives perhaps in Greece and were probably in Rome on Trajan's Arch. They travelled from Rome to Constantinople and provided part of the booty that the Venetians shared out with the Crusaders after the sack of Constantinople during the fourth Crusade. After a period standing guard outside the Arsenal in Venice they were mounted above the main door of St. Mark's until Napoleon turned up and decided that they would look extremely well in Paris.

He placed them in the Place du Carrousel. There is a fascinating engraving of the arrival of the four horses in Paris that can be seen in the Correr Museum in Venice. The horses are part of a procession of loot and are being closely followed by some unlikely looking camels. After 13 years in Paris the Austrians restored them to Venice where they stayed until the World War I when they travelled to Rome, to the garden of the Palazzo Venezia. They did not move far in World War II and were simply put away in large crates in a safe hiding place.

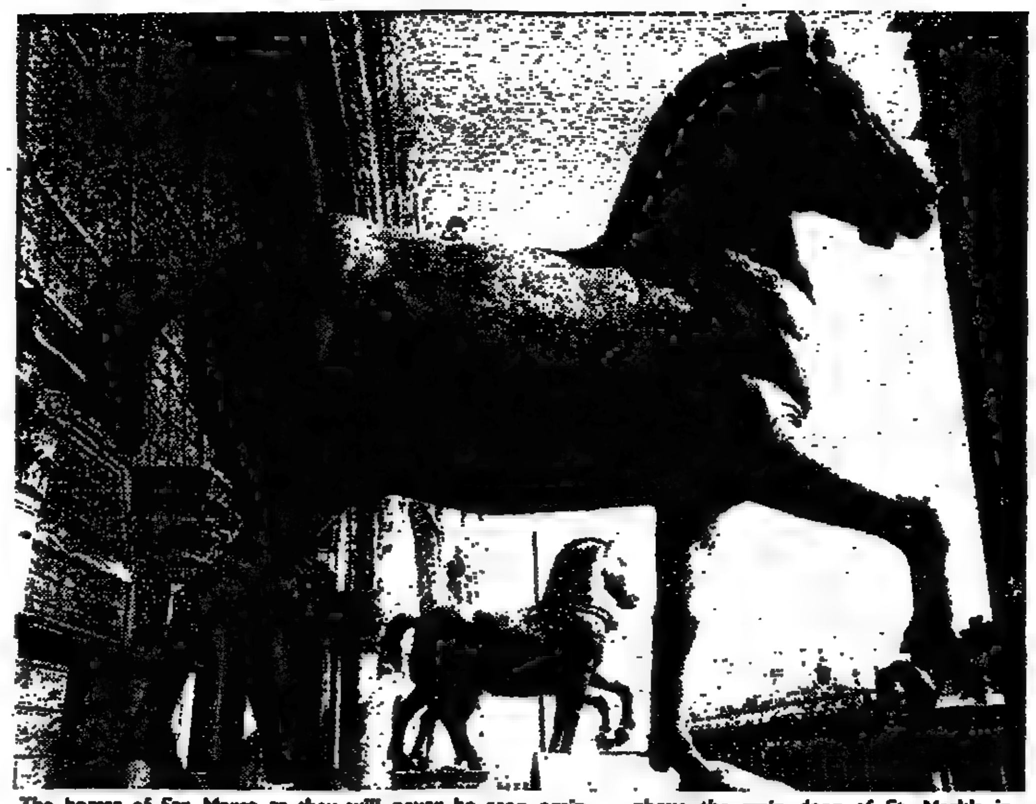
Now one of the four splendid beasts is in London for the next seven weeks. He is the central exhibit in a show that is designed to investigate the origins of the horses, whose early history is still shrouded in uncertainty. The great debate has always been, are they Greek or Roman? The exhibition provides a magnificent opportunity for stylistic comparisons.

The second room of the exhibition is full of Greek examples. The most striking is the bronze horse from the Museum of the Conservatori in Rome. This is probably the most beautiful of all the horses at the Academy. Although it is without its rider it is a remarkable example of the Hellenistic equestrian style from the circle of Lysippus.

In the third room, where the St. Mark's horse lords it over his rivals, there is a selection of Roman horses. The colossal horse's head from Pompeii dates back to the second century and the even larger bronze head from Naples was a princely gift from Lorenzo the Magnificent to Count Carafa of Naples. The recently discovered horse and rider from Miseno is publicly displayed for the first time in this exhibition. It was found in the Gulf of Naples a few years ago and is thought to date from the first century BC.

However fascinating the other horses are there is no doubt that, as a work of art, the horse from Venice is supreme. It has been displayed so that you have to look up at it and can also walk behind it and see it as you would on the ledge at the Basilica. Although always known as the bronze horses they were in fact cast in an alloy that is 98 per cent copper. The gilding is scored and marked, apparently because the horses were too dazzling in the Venetian sun when they were fully gilded. Looking at the horse in the London light gives it a new sense of form and a very potent presence.

If you can tear yourself away from the gaze of this magnificent animal the later rooms have pictures and studies by Leonardo, Canova, Tiepolo, Pisanello, Turner and Sickert that are all related in some way to the horses. When the exhibition was shown earlier in Venice there was much more made of the effect of the horses on Renaissance artists. In the London show bronze statuettes by Giambologna appear to be direct descendants of the San Marco horses.



The horses of San Marco as they will never be seen again — above the main door of St. Mark's in Venice. Their place will be taken by replicas

The horse is in London because all four have been removed from the facade of the Basilica of St. Mark's where they have been affected by atmospheric pollution. To ensure their preservation they will now be exhibited in Venice indoors and their place will be taken by replicas. This is sad because no replica will be able to approach the spirit and grace of the originals. It is unfortunate that some way cannot be devised that could protect them from the elements.

There is a clear display about the technology of preservation of the horses and a good short film on the present day breed of horse, the Morgan horse, that is similar in shape to the classical equestrian form seen in sculptures and castings.

The catalogue is excellent and tells you almost more than you thought you would ever want to know about bronze horses. The initiative of Olivetti and its ceaseless work to arrange for the horse to travel to London must be applauded, as must the clear and elegant design of the exhibition.

EDINBURGH FESTIVAL

The Golden Cockerel

by ARTHUR JACOBS

At his final Press conference, John Drummond, the Edinburgh Festival director, announced with some satisfaction that the audiences for this year's wholly home-grow operatic fare were only 1 per cent short of those who patronised last year's opera—mainly of foreign importation and doubtless more expensive. It is easy to see why Scottish Opera's production of Rimsky-Korsakov's *The Golden Cockerel* should have drawn very good houses and been hailed as a family entertainment.

But this achievement, if such it be, has been at the cost of fidelity to the work of art. A few seasons ago Scottish Opera mounted Smetana's *The Bartered Bride* in such a way that the fairground artists almost stole the evening from the singers. In this year's show, the circus performer who is allowed to impersonate the cockerel itself is a far greater distraction as she swings, pivots and mimes on her trapeze. The obtrusiveness is worse because the limitations of the King's Theatre compel the trapeze to be suspended out in front of the proscenium. In the original Glasgow production, I am told, it hung directly above the stage.

In vain the composer pleads, in a preface to the score, that stage tricks should not be exaggerated and that "an opera is above all things a musical work." Not only does a trapeze artist replace what should be a small mechanical toy. The whole staging, though splashed with story-book colouring, has no unifying thought except a disdain for the directions of the librettist and composer. The replacement of the oriental queen's magic pavilion, at the beginning of the second act, is a bad blunder; the appearance of astrologer in this act (whereas he really belongs to another location altogether) is worse.

The neatly rhymed verse of the Russian original derived from Pushkin is insulted by the crudely mis-rhymed English version of Stephen Oliver. It is similarly crude that the queen, instead of suggesting the mysterious seductive charms which belong to legend, gives a comic parody of sexual wriggles. Some amusing dancing by the company can be praised amid the general artistic debacle of David Pountney's production.

The stupid Tsar Dodon is sung amiably, but without much sharpness, by William McCue. Like Norman White as Polkan, he is sometimes too ready to drop from song into speech. The astrologer, cast by the composer for what he called a "tenor-altino" (Huges Cuenod used to do it perfectly) was allotted to John Winfield—who seemed awkward at first, but later sang admirably with an astounding high E. The role of the Queen of Shemakha really demands a specialised colloratura soprano rather than a delectable Mozartian lyrical soprano such as Elizabeth Gale is; but, if the tone was spread rather thinly, the agility and charm were there. Norman Maxwell, already noted as one of the company's best voices, did well as the Tsar's second son, Afron. The role of the housekeeper, Amelfa, needs a broader, older-seeming contralto sound than Claire Livingstone's. The cockerel's notes were well sung by Marie Slorach, who should have been placed invisibly.

Henry Lewis conducted, not with particular orchestral refinement, and not with sufficient care to let the words come through.

Covent Garden

New York City ballets

by CLEMENT CRISP

In a series of performances last week, the New York City Ballet showed itself a peerless ensemble. Ballet troupes have their ups and downs; NYCB has now soared far above the common run of companies by reason of a dance style and a repertory that have a beauty of utterance unprecedented in its three decades of existence. The NYCB manner is nowhere imprecise or indecisive; the magnificent inevitability of the choreography is expressed through dancing purposeful, musically apt, grand in impulse and outline, and because Balanchine's genius is constantly self-renewing, the academic dance itself is seen to be ever fresh, ever adventurous.

These qualities touch every member of the company, and to greater or lesser extent, every work in the repertory. Ballets range from the thrilling, epigrammatic *Kammermusik No. 2* (Hindemith/Balanchine), by way of the luminous *Ballo della Regina* (Verdi/Balanchine) and the appropriately Elysian *Chaconne* (Gluck/Balanchine), to the sheer professionalism of *Vienna Waltzes* (Strauss, Lehar/Balanchine). Two works we know from the Royal Ballet repertory — *Four Temperaments* and *Dances at a Gathering* — are hardly recognisable, so clean-cut is their performance. *Four Temperaments* on Friday night stood out as a seminal masterpiece in Balanchine's *oeuvre*, not just because the text and style were correct (the Sadler's Wells staging is so far "after" Balanchine that it could be by Béjart) but because all the muscular drama of the piece was honoured. In the Melancholic variation Bart Cook gave an interpretation of greatness, curving and stretching to present every nuance of the dance's temperamental inspiration: in Choleric, Karin von Aroldingen made an entrance as menacingly impressive as Carabosse's first appearance in *Beauty*.

With *Kammermusik No. 2* Balanchine displays all of his score's academic rectitude and mysterious poetry in writing for von Aroldingen and Colleen Neary and their male cohort. In this, as in *Temperaments*, he proves — improbably — that Hindemith is a major composer for dance.

It may seem platitudinous at this late stage in NYCB's history, to insist upon Balanchine's special relationship with music, but for British audiences it is the best way to understand why the company has so assured an identity. Balanchine is content to be guided by his scores; with no *arrière pensées* about drama or emotion other than those indelibly in the music itself. Thus his ballets speak directly of the music, for we see it made gloriously fresh.

In two works he tells us much about the dance theatre of the 18th and 19th centuries because he respects his scores on their own terms. *Chaconne* uses the ballet music from Gluck's *Orphée*; after an ensemble for the blessed spirits, and a duet for Suzanne Farrell and Peter Martins which hints at the opera's narrative, there ensue numbers for the *corps* and soloists with Farrell and Martins which, by their formal attitudes and devices, expose far more about the physical and emotional effects that obtained in the pre-Romantic opera-ballet than we have gleaned from dutiful reconstructions of 18th century technique and costume which so often amount to weedy posturings inside *tonnelets* and vast skirts. In *Chaconne* the theatrical life of the dance is strong, imaginatively stimulating: we understand the spirit of music and movement in Gluck's time.

In *Ballo della Regina* the preposterous evolutions of the statutory ballet scene in a 19th century opera (in this case Verdi's *Don Carlos*) are all succinctly present. The dances nod at, and even mock, the marmoreal conventions of the genre, and freed, sail splendidly on, with Merrill Ashley pouncing on the most fiendish technical difficulties, rejoicing in them, and then flashing by the next, death-trap with smiling eagerness and not a step misplaced.

So too, in *Vienna Waltzes* Balanchine turns to the great days of the waltz, albeit very differently from his manner in *Liebeslieder Walzer*. There are problems—decorative ones having to do with a hideous ballroom for Lehar's *Gold and Silver* and some of the nastiest outfits on record in this and the *Explosions Polka* in which Quasimodo as an *Incroyable* meets a cigarettte-seller from the night -club in Hell—but even these dances are ingenious, and confected with a gleaming show-biz skill.

The opening *Tales from the Vienna Woods* is beguilingly pretty; the *Rosenkavalier* sequence that ends the ballet is tremendous, with Suzanne Farrell, the belle of any ball, caught up in dreams of waltzing. And, because Balanchine is capable of the most heart-lifting theatrical effects, 25 couples pour on to the stage, the girls in white silk dresses whose trains, sweeping with the beat of the dance, are as much part part of the choreography as the dancers' bodies. The scene is an apotheosis of the waltz, and irresistible.

There is much more to report: a *Dances at a Gathering* in which the community of feeling among the cast was as inspiring as the way in which the dances were shaped, with all those pretty dramatic vivacities of Royal Ballet artists replaced by unaffected integrity of performance; the pleasures of Robbins' *Four Seasons* in which the exquisite Kyra Nicholls poured out a ravishing sequence of legato phrasing, and Farrell and Martins tore through a bacchanal with vertiginous daring. And in everything the NYCB corps de ballet, so distinguished and so distinctive in their expansive, airy excellence. I look forward to commenting further on this superb eye-opening season.

Midlands tour for Paraphernalia

The first tour in the Midlands Jazz Centre Society's autumn programme features Paraphernalia, the group led by saxist Barbara Thompson.

The tour began on Saturday, at the Bridge St. Arts Centre, Newcastle-under-Lyme. On Tuesday, September 11, the band is at the Braunston Hotel, Leicester, followed on Wednesday with an appearance at the Imperial Hotel, Nottingham. The short tour ends on September 13 at the Madeley Court Theatre, Telford.

Further information from Paul Kelly, Jazz Centre Society, c/o Birmingham Arts Laboratory, Holt Street, Birmingham, B7 4BA.

Coliseum

La Cenerentola

by RONALD CRICHTON

Rossini's *Cinderella* is back at the Coliseum in the staging by Colin Graham and Roger Butlin taken over by English National Opera from English Music Theatre. The much and rightly admired Della Jones returns as the heroine, spraying the house with softly sparkling florid singing of an accuracy and musicianliness that few of today's exponents of the role could rival. As Cinderella's doleful ditty shows, Miss Jones can sing legato as well as staccato. She is short on conventional pathos and, more important, of a sense of wonder and surprise when things come right—a make-up in the ballroom scenes like Olympia in *The Tales of Hoffmann* does not help. All the same, hers is a performance to catch.

Except for Prince Ramiro, sung by Graham Clark with an unambiguous brilliance at the top rarely achieved by British tenors venturing on this style, no one on the stage approaches Miss Jones's level. David Walsh and Nicholas Hytner, named as "staff producers," have undercharacterised the lower voices. Richard Van Allan, for example, as Cinderella's stepfather Don Magnifico, is made up like a ferocious colonel but his singing has surprisingly little bite. Alan Opie as Dandini, valet turned master for the time being, is likeable but misses the full possibilities of the reversal of roles—which should include a shot of pathos. Only Geoffrey Chard, vocally the least strongly equipped to meet Rossini's demands, establishes a definite character, as the tutor Alidoro. There were moments when one reappraised Ponnelle's clockwork, over-formalised but finally more illuminating treatment of the opera for La Scala. But there can't be many opera companies now who could field from within their own ranks so well balanced a team with such a clear idea of how Rossini should go.

Mark Elder conducted. On Thursday there were a few occasions when stage and pit separated like mayonnaise on a bad day in the kitchen, but Mr. Elder quickly brought them together. More important was his feeling for the serious side of the score, for Rossini's sheer musical excellence, peeping out often in unexpected places. More fun and tenderness will come: only the rarest ones like Beecham and Gui can count on the lot. But Mr. Elder is starting at the right end.

Albert Hall/Radio 3

Scottish Chamber Orchestra

by ANDREW CLEMENTS

The latest ensemble to be initiated into the rituals of the Albert Hall and its promenaders is the Scottish Chamber Orchestra. On Friday evening it made its debut there, under its associate guest conductor Tamas Vasary. Mr. Vasary doubled also as pianist in two works by Mozart, as soloist in the E flat concerto K.449 and obligato player with the soprano Margaret Marshall in the greatest of the concert arias "Ch'io mi scordi di te" K.505. The orchestra framed the concert with symphonies—Haydn's 80th and Schubert's Third. The performances were smoothly functional, tightly co-ordinated and texturally well-balanced certainly, but ultimately rather characterless. The Haydn D minor symphony is one of the finest of the last batch he wrote for Esterhaza, with an impassioned adagio and brimming with rhythmic energy, but under Vasary's lightweight, self-consciously classical approach even the last movement's superbly witty syncopations lost their impact. Similarly for the Schubert: fast tempi (too fast in the finale for the comfort of the strings) kept things spruce and trim but underinterpreted.

With the responsibility of conducting left to someone else, Vasary can be a provocative, inspiriting Mozart player. But K.449 is not, the last movement excepted, the easiest concerto to project, and he struggled to reconcile ensemble control and keyboard refinement. The performance was efficiently enough co-ordinated however and he made much more of the limited but very beautiful piano part in the concert aria; Miss Marshall took the opening recitative in fits and starts but gained smoothness in the aria proper, well weighted and well paced.

A pair of items for the orchestra's admirable principal clarinetist Janet Hilton completed the programme. Stravinsky's three pieces for solo clarinets were rather lost in the expanses of the Albert Hall, but John McCabe's clarinet concerto written last year for Janet Hilton, was a valuable introduction. It's a pleasing, unpretentious piece working for sharply-focussed movements into a seamless 10-minute span, each making a neat dramatic point and giving way to the next. A valuable addition to the repertory.

Finding Michael Kaye's successor

Following the apopintment of Mr. Michael Kaye as the artistic director and general manager of the South Bank Concert Halls, the London Symphony Orchestra is now advertising the position of managing director, and will be interviewing possible candidates from September 12.

Mr. Anthony Camden, chairman of the orchestra, was offered the post of managing director, but declined as he wished to cotinue his career as principal oboe in the LSO.

Boston Symphony Orchestra

by ARTHUR JACOBS

The Edinburgh Festival management has always realised the need to reserve some of its strongest cards until the end of the festival. No more decisive impact could have been contrived than the visit of the Boston Symphony Orchestra, at the conclusion of a European tour which did not include any other British city. The youthful looks and platform vivacity of Seiji Ozawa still lends an additional glamour to the orchestra's appearance, though he is now in his mid-40s and has been their music director since 1973.

On Saturday evening, in the second of the orchestra's two programmes, the inclusion of Ravel's complete Daphnis and Chloë fulfilled the emphasis which Edinburgh has given this year to Diaghilev (who died 50 years ago). It was preceded by Bartok's *Music for Strings, Percussion and Celesta*. Both works have been recorded, and doubtless very often performed, by Ozawa and the Bostonians. I was a little surprised to find Bartok's work rather overpushed, lacking in grace—and at the same time not immaculate for instance in the solitary note which ends the first movement.

The Ravel was brilliantly done, as superbly shaped in outline as it was sensitively realised in detail. Ozawa disposes his orchestra in slightly unusual fashion, with the violas at front right. He secures the combined, balanced weight needed for massive orchestral climaxes but is able to switch to the most delicate exposure of flute, alto flute, or trumpet —to name three instruments most distinctively demanded as soloists in this score.

It was a Scottish occasion, too, since John Currie's Edinburgh Festival Chorus participated—over 150 of them, but (as it proved) not too many for their wordless vocalisation in Ravel's score. Their initial entry was not good, the tenors mistaken in intonation and then the basses not strong enough on a low E. But later their precise and colourful contribution made its full effect.

The audience expected encores and got them—but is there any good reason why a conductor should not helpfully announce them by name? The rather unusual choices this time were the Russian Dance from Chaikovsky's *Swan Lake* (its extended violin solo displaying the assured style of the orchestra's leader, Joseph Silverstein) and the "Dance of the Tumblers" from Smetana's *The Bartered Bride*.

ENO commission Hamilton opera

English National Opera (financed by the Arst Council of Great Britain and the Ralph Vaughan Williams Trust) have commissioned a new opera, *Anna Karenina* from the composer Iain Hamilton. The libretto is by the composer, after Tolstoy.

The world premiere will be given in May 1981 with Lois McDonall in the title role. The producer will be Colin Graham, the designers Ralph Koltai (sets) and Annena Stubbs (costumes). Sir Charles Groves will conduct.

CRICKET BY TREVOR BAILEY

After Essex, a Somerset double

THE 1979 CRICKET season has ended in considerable style. A beautifully executed double-century by Gavaskar at the start of the week was responsible for that wonderful climax to what had until then been a very pedestrian Test in a second-class series.

Somerset, the only county without a major honour since Essex twice broke that particular barrier this summer, comfortably beat Northamptonshire on Saturday before a capacity crowd at Lord's to win the Gillette Cup.

Yesterday Somerset, who never quite recovered from their stumble against Kent, just failed in their pursuit of the double, and Ealham's side, who for the past decade have been the most impressive of the limited overs counties, won the John Player League.

Yesterday Somerset completed a remarkable "double" by winning the John Player League. This was in stark contrast to 1978 when, in the last two days of the season, they failed in both their quests.

In the false hope that there would be some life and moisture in the pitch at 10.30 am, and possibly influenced by the fact that the side's batting second had won this match on the last five occasions, Jim Watts put in Somerset, who by lunch were firmly in control and never completely relinquished it.

When a great player like Vivian Richards produces a major innings for the team batting first in a limited-overs match, the odds on victory, assuming the attack bowls adequately, are extremely high. Even if the side batting second possesses a master strokemaker, he will be under far greater pressure, as indeed proved to be the case with Allan Lamb.

Although it was pleasing to see Northants, one of the less glamorous clubs, appearing at Lords, watching them bowl it was rather difficult to understand how they had managed to reach the final. Apart from the admirable Sarfraz, their attack is woefully weak. In limited overs cricket this does not really matter, because the key to success is runs in quantity and at speed.

The first five in the Midlanders' order have all scored heavily and consistently this summer, helped by that batting paradise at Northampton. They have four fine batsmen—Cook, correct and sound; Larkins, spectacular and close to being somebody special; Wiley, a strong, attacking, sometimes brilliant stroke maker; Richard Williams; with enormous potential; and Allan Lamb, of genuine international class.

For Northants to have scored the 270 required to beat Somerset, at least three of this quintet had to play major innings. Joel Garner made sure this did not occur with a superb spell in which he captured six wickets for 29 runs in 10.5 overs on a pitch where the opposing bowlers had difficulty in restricting the batsman to under four per over and the luckless Lamb went for 70 in 12.

The 6 ft 8 in West Indian quickie, with his exceptional lift, was far more hostile and menacing than Ian Botham, who is currently the most effective England new-ball bowler.

All cricket lovers will be delighted that Somerset, after coming so close to success last summer, have broken their duck with a thoroughly well-deserved victory.

It was probably just as well they did it this year, because they will not be nearly so formidable in 1980 with their two West Indians unavailable through Test commitments. Without the batting, fielding and bowling of Richards and the bowling and runs of Garner they certainly would not have beaten Northants.

The most satisfactory feature of an undistinguished season was that those two reluctant virgins, Essex and Somerset, finally satisfied their patient supports by ending more than 100 years of waiting and hoping.

With four titles at stake for the 17 contestants, success is far easier to acquire than in those days when everything depended upon the county championship, and there were fewer overseas players around to change the balance of power.

TENNIS BY JOHN BARRETT IN NEW YORK

Tracy Austin in merciless mood

BEFORE A record crowd of 18,213 at the U.S. Tennis Centre in Flushing Meadow on Saturday, Tracy Austin of Rolling Hills, California, who will not be 17 until December, entered her first U.S. Open final by defeating a strangely inhibited double Wimbledon champion, Martina Navratilova 7—5, 7—5

Miss Austin now challenges Chris Evert-Lloyd for the title she has held since 1975 and, if she succeeds, she will become the youngest holder of this title.

For the second year in succession Miss Navratilova was thwarted here by a teenager in the semi-finals. Last year it was Pam Shriver—a tall, gangling amateur schoolgirl, only two months past her 16th birthday.

It was a totally professional performance of ground-stroke consistency, pin-point accuracy and relentless concentration

This was their ninth meeting this year, and the third success for Miss Austin, who has now won five of the 16 matches they have contested since 1977.

After losing her opening service game which contained two double faults, Miss Austin broke back at once and broke again in the fourth game. At 5—3 the American youngster served for the set and promptly delivered her fifth double fault and then missed with her usually reliable forehand for 0—30.

A smash from Miss Navratilova and a forced error on the volley cost a nervous Miss Austin her serve but she was rock-like two games later, especially on the double-handed backhand, when she survived three break-points to take a 6—5 lead. She claimed the set on her second set-point with a bullet-like return of serve down the line on the forehand which left her opponent helpless.

The second set was a repeat of the first, with an early 4—2 lead wiped out and the decisive break coming in the last game.

The men's final, also an all-American affair, will be between two New Yorkers—Vitas Gerulaitis of King's Point, the No. 4 seed, against John McEnroe of Douglaston, seeded No. 3.

Australian wins Burghley Trials

BY MICHAEL DONNE

MR. ANDREW HOY, from Australia, riding Davey, won the Burghley Horse Trials yesterday, narrowly beating Miss Torrance Watkins, from the United States, riding Poltroon.

Third was Mrs. Helen Butler, riding Merganser II; fourth was last year's winning combination, Mrs. Lorna Clarke, riding Greco; and fifth was the Swedish rider, Goran Breisner, riding Ultimus.

This is only the fourth occasion in the past 19 years that the Burghley Horse Trials, one of this country's top international three-day events, has been won by an overseas competitor.

The winner, Andrew Hoy, who rode for Australia in the World three-day event championships at Lexington in Kentucky in the U.S. last year, has spent most of this summer riding in this country.

He competed at the Badminton three-day event in the spring, and also at the Windsor three-day event in the summer, but without being placed. He was one of only two riders, the other being the Swede, who managed to get round the cross-country course on Saturday without incurring either time or jumping penalties.

The cross-country course is always the heart of three-day eventing. Saturday's course at Burghley proved the point once again. The four miles of 28 tough obstacles ended the hopes of 15 competitors, who were either eliminated at some point on the course or obliged to withdraw.

One fence on the course, the Trout Hatchery, a big drop jump into water, gave trouble to no less than 26 competitors, one-third of the total field.

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A time for concessions

THERE CAN be few grounds for optimism about the Rhodesia conference which opens in London today, since neither the Salisbury Government of Bishop Abel Muzorewa nor its Patriotic Front opponents appear in the mood for compromise. Yet the very fact that the conference is taking place at all is a considerable achievement and gives some cause for cautious hope. The reason is that the Lancaster House meeting grew out of last month's Commonwealth conference in Lusaka, at which it was agreed that Britain must mount a final effort to solve the Rhodesia deadlock.

Extremely anxious

As a result, today's meeting has not merely general Commonwealth support but particular backing from two of the men most intimately involved in the Rhodesia dispute — Presidents Julius Nyerere of Tanzania and Kenneth Kaunda of Zambia. For different reasons, largely economic, each is extremely anxious for a settlement, and as hosts to guerrilla forces each is strongly placed to exert influence on the Patriotic Front to moderate its hardline stance.

However, if the Lancaster House conference is to stand any chance of success, there will have to be major concessions from both sides on two central issues: a new constitution for Zimbabwe and the interim arrangements leading to fresh elections and independence.

The present Zimbabwean constitution gives whites a degree of power out of all proportion to their numbers. The British Government, rightly wants to reduce these powers yet retain a guaranteed role for whites in Zimbabwean society. It envisages an independence constitution similar to that granted to other African States. This will doubtless be hard for the whites who back Bishop Muzorewa to swallow, but swallow it they must.

Advantage

The major constitutional concessions, therefore, will have to come from the Salisbury side. But the Patriotic Front will have to yield more ground when it comes to the question of interim arrangements and control of law and order. Up till now, it has always demanded a dominant role in any transitional Government and in the armed forces. This it cannot hope to have. The transitional arrangements should be so ordered that no faction has an unfair advantage in the run up to fresh elections.

There appear to be four possible outcomes to the conference. In ascending order of likelihood these are: a comprehensive settlement agreement; an agreement between Mr. Nkomo and the Salisbury Government which omits Mr. Mugabe; all round failure; and an agreement between Salisbury and Britain which both Patriotic Front leaders find unacceptable. With such a broad range of possibilities, it is difficult to state categorically how the British Government can best serve both its own interests and those of Zimbabwe. But two points stand out.

Firstly, Britain must make clear to Bishop Muzorewa that unless his Government agrees to major constitutional changes it will not stand a hope of gaining Western support. There must be no doubt that Zimbabwe has a constitution which provides for genuine majority rule.

Popular will

Secondly, it should be made clear to the Patriotic Front that if Salisbury does agree to an internationally acceptable constitution, then Mr. Nkomo and Mr. Mugabe must be prepared to set aside self-interest and make concessions for the good of Zimbabwe. In particular, they should be prepared to give ground on the question of interim arrangements and submit themselves to the popular will in a free and fair election.

A display of obduracy by the Patriotic Front at a time when Salisbury was agreeing to an internationally acceptable constitution would give the British Government little option but to tilt in favour of the Muzorewa Government. The Conservative Party, which has so far gone along with Lord Carrington's initiative, would demand nothing less. Mrs. Thatcher's natural inclination would also be to follow this course. And she would stand a fair chance of bringing the U.S., Western Europe and moderate African opinion down the same path.

Every pressure must be brought to bear to see that the Lancaster House meeting succeeds, but both Salisbury and the Patriotic Front need to be aware that if it fails, the manner in which this happens will have major international repercussions.

Take-overs by big companies

THE FACT that GEC's proposed offer for Averys, the weighing machine company, has been cleared by the Monopolies Commission may give encouragement to other large companies which have been contemplating acquisitions in the UK. There had been an impression, though not supported by the record of the Monopolies Commission itself, that the political tide had been turning against acquisitions by large companies. Some companies whose bids were referred to the Commission declined to go through with the investigation, partly because they were not confident of gaining clearance. GEC decided to argue its case and although its industrial logic did not greatly impress the investigators, they could not see any serious damage to the public interest which might have justified rejection of the merger. In short, the Commission displayed its traditional pragmatic approach, as the law requires it to do.

Concentration

There is, however, still some uncertainty about official attitudes to acquisitions by large companies. The Green Paper on mergers policy, commissioned by the Labour Government and published last year, recommended a more critical approach to mergers which reduced competition, suggesting that the benefits to the public interest would need to be more clearly established. In addition—and this is more relevant to the GEC/Averys case—the Green Paper expressed concern about the increase in aggregate concentration in British industry, resulting in part from the take-over activity of large companies.

The Green Paper pointed out that many of the largest British companies already possessed dominant positions in a range of markets. While there were no grounds for presuming that the growth of large firms was in itself detrimental, the implication was that when a large company like GEC proposed to take over another firm which had a dominant position in its industry (as Averys does in weighing machines), this should be subjected to very rigorous scrutiny—to see whether the increase in concentration was offset by clear benefits to the public interest.

If these stricter criteria had been in force it is doubtful whether the GEC/Averys merger would have been cleared. Although the Department of Industry supported the merger as a contribution towards a stronger British capability in "total information systems," the Commission thought that only minor benefits would accrue to GEC in marketing these systems.

The present Government has declared itself in favour of a strong competition policy and of small companies, but it has not expressed a view about the Green Paper proposals. It would presumably support a more critical attitude to those mergers — mainly horizontal ones between companies in the same line of the business—which reduce competition in a particular market. There is a strong case for amending the guidelines to the Monopolies Commission so that greater importance is attached to the promotion of competition.

Political power

Should mergers policy also be used to counter what the Green Paper called the "significant accretion of economic power by large companies through further acquisitions."? Under present law this rather vague concept is not part of the Monopolies Commission's brief as the GEC/Averys report showed. Any move to introduce it could lead to a virtual prohibition on take-overs by companies above a certain size; this would introduce an undesirable rigidity into mergers policy. Moreover it is not certain how serious a problem the economic power of large companies is in an open trading economy like that of the UK. The argument seems to be based more on social and political grounds, that small and medium-sized companies need to be preserved for their own sake.

Legislative changes in merger control are a long way off: the Government's first priority is to get its recently published bill on other aspects of competition policy on the statute book. But in view of the high level of take-over activity now in progress a clarification of the Government's position would be welcome.

Last call for the governors. From left to right: Dr. Paolo Baffi (68), Dr. Otmar Emminger (68), M. Bernard Clappier (65), Mr. Gerald Bouey (59), Mr. Teiichiro Morinaga (69), and Mr. Norlander (70).

Watershed for central banks as new leaders are chosen

BY DAVID MARSH

AMID THE flurry of welcoming handshakes, there will be a touch of Auld Lang Syne in the air when Mr. Paul Volcker, the new chairman of the U.S. Federal Reserve Board, makes his expected debut at today's meeting of central bank governors in Basle.

The leadership switch at the Fed, where Mr. Volcker took over from Mr. William Miller in the wake of President Carter's July Cabinet shake-up, is only the opening move in a wide-ranging series of changes at the top of leading central banks due to unfold over the next few months.

A number of familiar faces, coming up for retirement more or less en masse, will be saying their goodbyes. By the beginning of next year, there could be new governors at no less than seven of the 11 countries in the industrialised world's monetary power club, the Group of Ten and Switzerland.

The changes mark something of a watershed in more ways than one. They are taking place at a time when the power of the central banks to influence international economic developments is undergoing a revival. Reduced during the last few years of currency unrest to little more than crisis managers, central bankers have at last persuaded their governments of the virtues of policies aimed at relative currency stability—and, this year at least, have wrested back control of the foreign exchange markets.

Since the November dollar defence measures and the implementation of the European Monetary System, a combination of heavy intervention by the monetary authorities and collaborative economic policies by major Governments has sharply reduced currency fluctuations.

With the U.S. Administration's tolerance of high interest rates likely to wane as recession continues into election year, the climate for policy co-ordination in 1980 may not be as favourable as it has been this year. Maintaining the pattern of currency stability will thus be a crucial task for the new men at the monetary helm—and personalities will play a part.

Informal contacts between central bank governors and their chief aides through monthly meetings at the Bank for International Settlements in Basle have long provided a crucial lubricant in the machinery of international economic co-operation. But it is clear that despite the autonomy in economic decision-making enjoyed by central banks like the Fed and West Germany's Bundesbank, the attitude of government is all-important.

Last year's Basle meetings were often tortured affairs. Up to the measures of November 1, no amount of deliberations between the European and U.S. delegates on the mechanics of intervention could conceal the lack of political will on the part of the U.S. Government for an initiative to support the dollar.

This year's sessions have been more relaxed. One leading central banker predicts that the elevation of Mr. Volcker, who put in numerous appearances at the Basle gatherings in his previous capacity as head of the New York Fed, will improve the atmosphere still further.

The need for men who fit in both on the domestic and on the international scenes—and who don't mind becoming a political football when the economic going gets rough — explains the difficulty of finding successors for retiring central bank chiefs in several countries. The financial rewards on the face of it appear attractive enough—the Bundesbank governor is reputed to earn some DM240,000 (£59,000) a year, the head of the Bank of Japan Y50m (£103,000) and his counterparts at the Bank of Italy and Bank of Canada around L60m (£33,000) and Can.$60,000 (£23,000) respectively. But salaries for the heads of private banks in these countries are in some cases even higher—and Mr. Volcker had to take a salary cut from $110,000 to $57,500 (£26,000) when he moved to the Washington Fed from his post as president of the New York Federal Reserve Bank.

The new batch of central bank chiefs will be relatively youthful. The average age of the present governors of the Group of Ten and Switzerland is 63.

With a career stretching back for over 25 years at the New York Fed, Chase Manhattan, and the Treasury, Mr. Volcker could in no way be called inexperienced and his handling of U.S. monetary policy during his first month in office has drawn unqualified praise from foreign central banks. Yet, having just celebrated his 52nd birthday (born September 5, 1927), he is easily the youngest of the present top central bank governors.

It is likely, however, that Mr. Volcker will shortly be giving up his place at the foot of the age scale. Herr Karl Otto Poehl, the present vice governor of the Bundesbank, who is widely expected to take over from Dr. Otmar Emminger at the end of the year, is only 49.

Of the impending retirements, those that can truly be said to be ending an era are taking place in Europe, where Dr. Emminger (68), at the Bundesbank, M. Bernard Clappier (65) at the Bank of France and Dr. Paolo Baffi (68) at the Bank of Italy are all due to leave office around the end of the year.

They have between them chalked up 89 years of service to their central banks, and have won considerable international reputations in the process.

Dr. Emminger, who was chosen in 1977 to serve 2½ years as governor, has become widely known for his role as Germany's chief monetary trouble-shooter during every currency flare-up of the last decade. M. Clappier has been an unswerving advocate of European monetary integration for over 30 years—ranging from his association with M. Robert Schuman after the last war up to his role as France's chief negotiator on the setting up of the European Monetary System. And Dr. Baffi is the man credited with masterminding the dramatic improvement in Italy's external finances since the lira crisis of 1976.

Only in the case of the Bundesbank has the succession problem been more or less cleared up. The choice of Herr Poehl as the next Bundesbank chief—which has been extensively leaked in the German Press this summer—has been criticised by some members of the Opposition on the grounds that it might politicise the independent Bundesbank. (Herr Poehl is a member of Herr Helmut Schmidt's Social Democratic Party, and was his right-hand man at the Finance Ministry, in 1972-74.) But no one seriously doubts Herr Poehl's qualifications for the job, and, barring last minute upsets, his nomination is expected to be formally approved by the German Cabinet this month.

In France, no replacement for M. Clappier appears to have been found yet. One indication of the succession problem is that M. Clappier was asked by President Giscard d'Estaing to stay on this year to help with the efforts to set up the EMS, despite having reached the normal retirement age of 65 last November.

A candidate for the next governor being tipped in Paris is M. André de Lattre, aged 56, the present head of Crédit National — the state-controlled industrial financing body—the same job that M. Clappier held before taking up office in 1974.

The situation in Italy is even less clear-cut. Dr. Baffi, who has been in charge at the Bank of Italy since 1975, has stated that he wants to resign by the end of the year. He has become increasingly bitter about his involvement in the judicial investigations into the alleged granting of soft loans to Societa Italiana Resina, the Italian chemicals group, and he faces charges—vigorously denied—of withholding evidence and misusing state funds in connection with the affair.

The Italian Government is, however, putting pressure on Dr. Baffi not to resign—partly because of the difficulty in finding a successor. Sig. Bruno Visentini, who was Budget Minister in the last government, and Sig. Guido Ciampi, the central bank director general, have both been mentioned as possible replacements. Sig. Rinaldo Ossola, the former Foreign Trade Minister who was No. 2 at the bank under the previous governor, Sig. Guido Carli, has said he does not want the job.

A similar predicament prevails in Japan regarding a successor to Mr. Teiichiro Morinaga, whose five-year term at the Bank of Japan is up at the end of the year. Mr. Morinaga, 69 this month, is understood to be determined to step down.

On the list of likely successors are thought to be Mr. Satoshi Sumita, aged 62, who was chief of the Exim Bank until last year after retiring from his post as vice-Minister at the Finance Ministry, and Mr. Haruo Maekawa, 63, who has been the deputy Governor under Mr. Morinaga, and has also spent time at the Finance Ministry. There is, however, no consensus yet on replacement, and even some speculation that Mr. Morinaga will stay on for at least part of a further five year term because of his close relationship with Mr. Masayoshi Ohira, the Prime Minister. In fact Mr. Ohira's ousting of Mr. Takeo Fukuda from the Premiership 10 months ago may have blotted the chances of Mr. Sumita, who is known to be a Fukuda man. But the situation could change again after next month's election.

Domestic politics also hold the key to the central bank governorships in Canada and Sweden. In Ottawa, observers see a definite possibility of a change at the top of the Bank of Canada in February when the seven-year term of Mr. Gerald Bouey, aged 59, expires. There is no indication that Mr. Bouey wants to give up the post, and government officials have been careful not to comment on the matter. But the expiry of Mr. Bouey's tenure provides an opportunity for Mr. Joe Clark's new Conservative Government to bring in its own man.

In Sweden, the choice of the next Central Bank Governor will be heavily influenced by the outcome of the general election this month. Mr. Carl-Henrik Nordlander, the 70-year-old present incumbent, retired in 1975 as managing director of the state-owned PKbank, but was brought back after the defeat of the Socialists in the autumn of 1976 to serve at the Riksbank for the three-year parliamentary term. He has signalled his intention to retire at the end of the year—and one of the first jobs of the new administration taking office after the election will be to find his successor.

Of the remaining central bank governors in the group of ten and Switzerland who look certain to remain in their positions in 1980, none is likely to stay on for more than a few more years. Mr. Gordon Richardson, 63, the Governor of the Bank of England, will be one of the longest runners. Now into the second year of his second five-year term, he is not due to retire until mid-1983.

In Belgium, M. Cecil de Strycker, aged 64—who is probably the only foreign central banker to have been born in Derby, England—is expected to remain in office for only a further two years after his five-year term runs out next February. Dr. Jelle Zijlstra, aged 61, of the Dutch central bank, who has held his position since 1967, has his second seven-year term running until May 1981. It is not yet known whether he will stay on after that.

The final member of the central bankers' club, Dr. Fritz Leutwiler, the President of the Swiss National Bank, has also indicated that he, too, will not remain in his post for all that much longer—despite being only 55. During a newspaper interview this summer in which he affirmed his desire to resign well before reaching the retirement age of 65, he was asked whether he felt himself well in his job. His answer might well sum up how other central bank governors feel about the rigours of their employment: a state of well-being, he said, was a position in which no central bank chief would be lucky enough to find himself.

MEN AND MATTERS

Who will pay Rhodesia's rates?

The rival factions at Lancaster House, talking about the future of beleaguered Rhodesia, are themselves surrounded by a disgruntled mass of British citizens with a direct interest in the outcome of the conference. The residents of Westminster stand to be much better off when somebody hands over the huge sum for outstanding rates on Rhodesia's offices in London

I recently wrote about an Australian woman tourist who was wounded by a crest which fell off Rhodesia House in the Strand, and is now vainly trying to sue for damages. This has produced a heartfelt letter from Councillor Donald du Parc Braham, chairman of Westminster City Council's finance committee.

He tells me that the outstanding rates total £325,000 (as journalists will, I had underestimated, putting the figure at £250,000). Braham describes long years of "stone-walling" by the Foreign Office.

It seems that full rates are still payable on Rhodesia House because it contains furniture. Braham says the FO refuses to allow anything to be removed, and adds that all the city council has ever received is sympathy (which he meaningfully puts in quotation marks).

Braham's letter describes the legal position, and amply confirms what an FO spokesman tells me: "It is all a fog and a bog." The building is still covered by the Diplomatic Privileges Act 1964, so that Westminster council dare not seize goods and chattels in lieu of rates.

Whether the new rulers of Zimbabwe will want Rhodesia House is another mystery. Meanwhile, Braham says he—and the "long-suffering ratepayers of Westminster"—will be delighted to hear from any FT reader who can suggest a way out of the impasse.

"Seeing that the TUC has condemned private medicine, I assume you'll be wanting a second opinion from your shop steward?"

March message

There were strong political overtones to the demonstration in London yesterday by 1,000 Vietnamese "boat people," in remembrance of an estimated 1m of their compatriots who have died. The event was organised by the British Committee for Free Vietnam, a neutral-sounding organisation which turns out to be based in the offices of the Freedom Association.

The publicity material for the demonstration was prepared by Peter Thompson, a senior official of Aims of Industry. Taking part in the march were Michael Ivens, director of Aims, and Norris MacWhirter, vice-president of the Freedom Association. Neither of their organisations was mentioned in the advance publicity material.

The chairman of the Free Vietnam committee is Major Patrick Wall, the Right-wing Tory backbencher; his vice-chairman is Albert Roberts, a Labour MP on the committee of the Anglo-Korean association.

A petition was presented to Mrs. Thatcher at Downing Street, urging Britain to seek Vietnam's expulsion from the United Nations. It also called for the breaking of diplomatic relations with Hanoi. But Derek Jackson, the Freedom Association official who organised the day's events, insisted: "If we had wanted to make political capital, we should have brought along all our supporters."

Before the march, a Vietnamese organiser at the refugee centre in Kensington said: "Our people know the demonstration is political. But many have decided to go along because they have such a great hatred of communism."

Flat rate

Having colonised the more expensive tracts of central London, the Arabs are now overlaying British memories of how things used to be in Cannes, a resort first colonised by us, and a favourite of retired colonels.

The Brits are on the way out, a fact poignantly symbolised by the tearing down of their favourite hotel, the Gray et d'Albion. Although this has been done by a French-Jewish developer (also responsible for the Tour Montparnasse and the Press hotel for the Moscow Olympics, the Cosmos) the buyer of the 1,000 sq m penthouse flat on the top is, of couse, a Saudi businessman—Mazen Pharaon. The price: £4.5m, believed to be the highest price ever paid for a flat anywhere in the world, and roughly the same as was paid for the old hotel before it became a hole in the ground. (It is now a concrete monstrosity like any other.)

Phadaon will not feel isolated. The neo-Gothic mansion in Cannes inhabited by the Ali Khan during his love affair with Rita Hayworth is occupied by the heir to the Saudi throne—now spending £3m on having the interior adjusted to his tastes. Adnan Khashoggi and Akram Ojjeh, former owner of the liner France, now the Norway, are other popular dinner guests among Cannes residents.

Money troubles

While ITV remains shrouded in appalling silence, there are cries of frenzy within the BBC as it lines up its current affairs offerings for the autumn and beyond. An early casualty of the reshuffling has been the weekly Money Programme. One of its presenters, Peter Hobday, is being whisked away to "front" the Newsnight programme, which will appear on five evenings a week on BBC 2.

I gather that Colin Chapman, economics oracle of the Money Programme, is also leaving to devote himself more to the magazine Eight Days, of which he is publisher. Confronted by this vacuum, with the programme due to return early in October, the BBC is reported to be trying to lure back Alan Watson, anchor man for the Money Programme several years ago. He is now in Brussels, where he set up the EEC television facilities (which have been conspicuously underused).

A BBC spokesman told me yesterday: "Nothing has been finalised. The first task is to sort out Newsnight."

Silence is golden

The latest story from Moscow concerns a Red Square parade attended by Hannibal, Alexander the Great and Napolean. "If only I'd had some of those tanks, instead of my elephants," enthused Hannibal.

"Look at those ground-to-air missiles," cried Alexander. "Conquering the world would have been a walkover."

Napolean hardly looked up, immersed in a copy of Pravda. "If I'd had one of these," he said dreamily, "no-one would ever have heard about Waterloo."

Observer

John Elliott on how the Belfast shipyard of Harland and Wolff is planning for the 1980s

Harland's fight to stay in the big league

AT THE weekend 400 redundant men walked out of Harland and Wolff's shipyard in Belfast for the last time, having accepted special lump sum payments averaging about £500 each in lieu of notice. They represented the first, successful, stage of the massive shipyard's attempt to slim down its 7,000-8,000 workforce and increase productivity so that it can stay in business in the 1980s.

How far it will have to retrench in order to remain viable at a time when there is intense international competition for scarce shipbuilding orders is at present far from clear. It is suffering from having to fall back on orders for smaller ships than the super tankers for which it was designed.

It is also suffering from a lack of cash. It has been told by the Government that in future its State aid will be strictly limited—in the past 14 years it has received at least £140m from the Government and is due for £22m in the current year up to next March.

Like many other UK yards it will run out of ships to build during the next 18 months and has little hope of obtaining enough new ship orders to fill its vast facilities. Lack of morale among its workforce has also hit its productivity record which had improved between 1976 and 1977.

On the credit side, however, the yard has persuaded its workforce to accept 630 compulsory redundancies, which include the 400 who volunteered to leave eight weeks earlier at the weekend. It has managed to avoid the industrial unrest that greeted British Shipbuilders' retrenchment plans for the rest of the UK yards. (Harland and Wolff is separately owned by the Northern Ireland Department of Commerce.)

But the problems of Harland and Wolff are more complex than those of other UK yards because it is the biggest single employer in an area of social unrest and high unemployment.

Like other industries in Ulster, the yard has only rarely been directly affected by the sectarian troubles of the past decade, although it obviously suffers from its location. Suppliers and subcontractors' representatives are often loth to visit Belfast to see the company and it sometimes has trouble recruiting senior management—at present it is short of a top production manager whose job is being done by the personnel director and there is a vacancy for an executive director.

For several years the workforce has been convinced that no British Government would ever dare to carry out its occasional threats to shut down the yard and discharge its thousands of workers onto the streets of Belfast with all the direct and indirect effects that would have on the local economy. This probably remains true despite the present Government's determination to cut both public spending in general and industrial aid in particular.

Gradual drop

Nevertheless, over the years there has been a gradual drop in the Harland labour force—from 25,000 in the 1950s to about 7,200 when the present 630 redundant men have all left next month. That decline will continue, with perhaps up to another 1,200 going next year unless there is a marked change in the yard's performance and fortunes.

A decision will then have to be made about whether the workforce can be cut to much less than 6,000 if Harland is to continue to market itself as an international shipyard. An alternative is for it to change its type of operations and expand its engineering and steelworks subcontracting which is carried on in a relatively small way at present.

Mr. Giles Shaw, the Minister of State responsible for Ulster industry, has made it clear that, while the Government is prepared to help the yard obtain orders for ships and other work, it is not prepared to fund operating losses indefinitely. In 1978 the yard lost £25.4m and the Government's allocation of £22m aid in the current year to next March will be fully taken up to cover losses.

The story of Harland's problems goes back to 1967 when the yard started on a two-stage modernisation programme that cost £54m by 1974. This turned it into a super tanker yard with a horizontal building dock, replacing traditional slipways, capable of building a 330,000 dwt tanker. It bought two mammoth Goliath straddle cranes and built other facilities. Now one of the giant cranes, which were seen as symbols of the yard's new future, stands broken at the end of its runway, slowly being repaired after being torn from its tracks by a whirlwind earlier this year. Nearby, another reminder of the yard's lean times is a redundant engineering shop that has been left half demolished, to save the cost of removing it from the site.

The problems came when the bottom dropped out of the large tanker market, forcing Harland to switch to other types of ships before it had even made a success of the super tankers. Old slipways were reopened and the yard returned to ferry building obtaining orders worth about £14m each from British Rail. In doing so, it has re-established its old role as a major, if not the major, UK ferry builder (British Shipbuilders would like to see ferries built at Govan on the Clyde). It has also adapted its tanker building skills for much smaller vessels—such as an ore bulk carrier which has just been floated off in the main building dock where it will be followed by two liquid gas carriers, together worth up to £70m. But these are much smaller ships than Harland would like and do not fully use its mass steel production facilities or its steelworking labour force of 2,500. A big tanker can take up to 40,000 tons of steel while a 120,000 dwt bulk carrier needs only 18,000 tons and a ferry only 3,500 tons. But these smaller ships do need far more skilled ancillary work and, steelwork apart, are therefore more labour-intensive.

Making the switch involved a managerial reorganisation. Production lines, work stations, and output targets had to be altered to take account of both the change of scale and other differences—for example the use of lighter steel and an increase in the amount of curved steelwork. Two thirds of the 650 welders in the yard had to be retrained to qualify for the high standards required on specialist steel welding on the gas carriers.

These changes have helped to contribute to a drop in productivity and some delivery dates have slipped although in general industrial relations have been remarkably good. Inter-union rivalries have decreased and only 269 manhours have been lost by strikes so far this year, which is a record, while the figure for last year was 1,700 man hours. In 1977 it was 855 man hours, and for 1976 10,000. But the yard still has a reputation elsewhere in the industry for losing the advantages given by its good strike record through poor productivity.

Claims boost

It has also been hit by a spate of claims, encouraged by the Boilermakers' Amalgamation, for industrial deafness from past and present employees on a scale never before experienced in the UK. So far it has had 2,300 claims and, with some early awards by industrial tribunals going as high as £10,000 per person, the company has made provisions in its accounts for an eventual outlay of £10m.

But its general industrial relations, and its ability to cope with its problems, has been helped by a quite considerable growth in employee participation during the past five years. This started when Mr. Stan Orme, then Labour's Minister of State for Northern Ireland, encouraged the unions and management to introduce a system of worker directors.

Inter-union tensions and jealousies, plus the lack of interest and opposition of some unions to the whole idea, has meant that the worker director scheme has not got off the ground. It is however still being discussed by the shop stewards even though they would not want to be party to Board decisions on redundancies. The idea was that the unions, management and Government should each have five seats on a 15-man board. A few months ago, just before the General Election the shop stewards revived the idea, apparently intending to claim six seats so that the Boilermakers' Amalgamation (which traditionally claims precedence over other shipbuilding unions) could have two. But the idea has been pushed into the background because of the redundancies.

In the meantime a substructure of participation arrangements has been built up and has been successful enough for Sir Brian Morton, the Harland chairman, to say in his last annual report: "Evidence of the benefits of greater co-operation between management and trade union representatives . . . has gained further ground through the various sub-board participation committees, and but for this factor the losses (of £25.4m) might well have been greater."

Now the spate of redundancies have been upsetting the fragile unity of the participation committees. The unions have told the Government that, even though there are 40 joint productive committees covering detailed parts of the yard's work, the management has not been handing over sufficient information for the stewards to be able to co-operate in the primary requirement of improving productivity.

Above the productivity committees making a four-tier participation structure, are five joint unit councils, which have had varying degrees of success. On top of this, according to the full Orme plan, would be two further levels not yet introduced. These would be the top three-part board and a joint implementation council to ensure that management executed board decisions.

Compulsory

It is hardly surprising that the participation exercise should have been upset by the labour-shedding. Harland decided not to follow the British Shipbuilders' path of settling for voluntary redundancy. Instead it has introduced compulsory redundancy for 630 people—330 manual workers and 300 white collar staff—whom it picked out as the "least effective" of its employees. In age they range from people in their 20s to early 60s and they have been chosen because the management regards them as bad timekeepers or poor workers, or because they are in jobs or departments no longer needed. Their redundancy payments, based on current weekly wages of £75-£90 for manual workers, are substantial—for example a man in his 40s with 15 years' service receives £3,500, while older workers can get far more. Now there are rumours—based on discussions the company has had with staff and union officials about possible future manning levels for different sorts of order books—of a further 1,200 redundancies next March when work on existing ships starts to tail off rapidly.

THE SHIPYARD'S ORDER BOOK

Ship	Owner/Operator	Progress	Delivery date
66,000-dwt products carrier	Furness Withy	On trials	1979
7,850-grt ferry	British Rail	Launched in May	1979
120,000-dwt bulk carrier	Orion Leasing/ British Steel	Floated out this weekend from building dock	1979
7,900-grt ferry	British Rail	Being built	1980
7,900-grt ferry	British Rail	Being built	1980
7,900-grt ferry	British Rail	Not yet started	1980
59,000 cu. mtrs. liquid petroleum gas carrier	North Sea Marine Leasing/Shell	Being built	1980
59,000 cu. mtrs liquid petroleum gas carrier	North Sea Marine Leasing/Shell	Assembly starts soon	Early 1981

dwt: deadweight tons; grt: gross registered tons; cu. mtrs: cubic metres.

The exact number that leave will depend on how many new orders for ships are obtained and how successful Harland is in extending its other activities and diversifying into other work. It may, however, receive orders for only one or two ships by next March (possibly a ferry for British Rail or a private sector operator), although it is also chasing bulk and liquid gas carriers and the Northern Ireland Department is pressing the Minister of Defence for some Royal Navy work.

With its experience of structural steel, it is also tendering for bridge steelwork contracts, and has developed plans for a North Sea aircraft platform (known as a STOLPORT) and other North Sea vessels as well as linking up with MAN of Germany and other companies to build engines under licence.

There will be some Government financial support for the future shipbuilding orders, even though Mr. Shaw has been stressing that the Government is committed to nothing after the current £22m aid runs out next March. In fact, there will be several millions of pounds—maybe as much as £10m or £12m—payable after next March against existing individual ship orders. The money will be allocated from Ulster's equivalent of the UK shipbuilding intervention fund which subsidises up to 30 per cent of the cost of ships, which can amount to £4m on a rail ferry for example. There will also be similar subsidies on future ship orders, and the Government has not ruled out providing further funds if the yard's productivity improves.

So the future of this important employer in trouble-torn Belfast depends both on its ability to obtain orders of some sort fairly quickly, and on the willingness of its workforce to accept redundancies and boost productivity. Other industrialists in Ulster want the Government to stick to its policy of restricting aid, in line with their general support for its economic and industrial policies, although they are worried at the same time about the Province's narrow industrial base of engineering and textiles, both of which have their own problems.

The best that can be hoped for is that sufficient work is found to keep 5,000 to 6,000 of the workforce busy into 1982 by which time there may have been a significant improvement in worldwide shipbuilding. That would make it easier for the Government to justify supplying more aid. The worst position would be an absence of orders with a gradual run-down of the business till, barring some dramatic political initiative, it stopped being a major shipbuilder and became a much smaller engineering company—with all the problems that that could cause for Ulster.

Letters to the Editor

Pension schemes

From Mr. Raymond Nottage.

Sir,—Mr. Shucksmith states (September 1) that by switching the NCB and British Rail pension schemes to a pay-as-you-go basis" there would be a short-term reduction in Governmental support needed for these industries, but only at the price of a longer term cost."

This prophecy about the longer term cost must surely rest upon an assumption, unstated by Mr. Shucksmith, about the ability of pension funds to earn a positive real rate of return on their investments. In their *Market Review* for February, 1978, stockbrokers Phillips and Drew suggested, however, that over the period 1963-1977 the total return earned by the average UK private pension fund, excluding property, was some 2½ per cent below the rate of wage inflation. With property included over the last four years of that period, the real rate of return was a negative 3 per cent.

With this vital factor in mind, the Wilson Committe asked the Government Actuary's Departmentto make an assessment of what would be implide for pension funds if inflation remained high and real rates of return continued to be low or negative. In reply the Department said:

"We have made some calculations for a model scheme on the same general lines as the main public service schemes, providing final-salary pensions protected again inflation after award. Some years ago rates of return of 2 per cent net of earnings inflation and 4 per cent net of price inflation might havebeen regarded as reasonable. On that basis the contribution rate required to support the benefits of a new entrant to the scheme was 17 per cent of salary . . . . If one were to asume for all purposes a nil rate of return, this would go up to about 32 per cent and if one assumed a negative rate of 2 per cent it would be about 50 per centof salary.

"As deficiency charges piled up and future service contributions increased, the burden would gradually become intolerable. Employers would increasingly find it impossible to pay the rates of contribution recommended by actuaries and they would certainly doubt thewisdom of paying contributions to a fund where those contributions would wither away in real terms." And so on and so on.

Past Governments have been extraordinarily culpable in risking taxpayers' money in an enormous gamble on the future relationships between the rates of wages inflation and the rates of return obtainable on investment by a huge aggregate of pension funds. Itis to be hoped that the present Government, because of their overriding commitment to reduce public expenditure, wil lnow decide to follow the prudent course of switching the public sector funded pension schemes to pay-as-you-go, thus securing an immediate significant economy and, on presnet indications, a long term saving too. In this process the trail blazers should obviously be the CB, British Rail and local government schemes.

Raymond ottage.
Reform Club, SW1.

Third London Airport

From Mr. R. A. Vallance.

Sir,—Councillor D. Wood, writing (August 31) on behalf of Maplin, would benefit from reading the Roskill Commission Report. I quote para. 13.9 which sets out one of the reasons why Nuthampstead was rejected as totally unsuitable before the Commission made its recommendation from the remaining three sites on its short-list:

"The agricultural loss resulting from its selection would be serious—it is the worst of the four sites in this respect."

Maplin (then "Foulness") was one of the other three.

Councillor Wood is incorrect in other respects. Langley is the same site as Nuthampstead and would have been flattened had Nuthampstead been chosen last time. It is also wrong to say that much has changed since Roskill. A letter written to our Association on behalf of the Government Study Group could only suggest two real changes in the last eight years: (1) that noise will be a lesser problem; a doubtful argument, and (2) that a smaller site of two runways will be required; this will have no marked effect on the huge size of development in the surrounding area.

We have every sympathy with those who oppose the choice of Maplin, and accept that this would involve environmental loss. However, if the need for a Third Airport is proved, the environmental damage will be far less than at any inland site suggested. Maplin was rejected by Roskill for economic reasons. The Heath Government decided to proceed notwithstanding, and, but for the oil crisis, aircraft might have been taking off over the sea by now.

R. A. Vallance.
The Langley/Nuthampstead Preservation Association,
Flint House,
Barkway,
Royston, Hertfordshire.

Licences for engineers

From the chairman,
Council of Engineering Distributors.

Sir,—The correspondence headed "Engineers" (September 1) started by discussing the merits of a new form of engineering degree course, but has since developed into an argument about the pros and cons of licencing and registration for engineers. What is being discussed is in fact a minority view of these important matters. At the risk of involvement in a private squabble, it may help the general reader if I give a more central view of this subject on behalf of the Council of Engineering Institutions (CEI) which can speak for the entire engineering profession.

It should not be thought that licensing and registration of engineers are new concepts; both are well established in this country. The statutory licensing of engineers to carry out certain specific functions where public health and safety are particularly at risk has existed for many years. These functions include those connected with the inspection of dams, mining, marine and aviation engineering. If in future new engineering functions in the same category are identified, the profession will welcome specific licensing of engineers to carry them out. It is however a long step from this form of specific licensing to the general licensing of engineers to carry out ill-defined functions in manufacturing industry. General licensing is unnecessary and not in the public interest.

The voluntary registration of engineers and technicians has been carried out successfully for the CEI by the Engineers Registration Board (ERB) since 1971. There are three separate registers for Chartered Engineers, Technician Engineers and Engineering Technicians respectively which record the particulars of those who meet the clear and specific standards of education, training and experience which are defined in the Royal Charter and By-laws of the CEI.

At present the registers contain the names of some 195,000 Chartered Engineers, 51,000 Technician Engineers and 19,000 Engineering Technicians.

We believe this form of registration is very much in the public interest because it establishes and improves standards of competence, and makes it much easier for employers to recruit competent people and build up the team of identified engineers which Dr. Clayton requires.

We believe most employers would welcome this form of registration if the registers were fully comprehensive and this would be achieved if Government backing were given to the present registration arrangements. CEI therefore supports statutory registration.

At present, registration is conducted economically and efficiently by the voluntary effort of members of the engineering profession and involves no public funds whatever. Some commentators would like to see the Engineers Registration Board swept away and replaced by a publicly financed body. It is CEI's view that it is preferable to strengthen the efficient system that now exists by giving it Government recognition.

G. S. Hislop.
2, Little Smith Street, SW1.

Consumption of gas

From Mr. M. G. Lewin.

Sir,—I have followed the comments in your paper on the suplies of gas, in particular the article of Sue Cameron, and the recent letter from Mr. E. L. Walker (August 31), with more than passing interest.

It is, of course, almost unbelievable that at a time when we are constantly being exhorted to save energy and that the world's oil resources are going to disappear within the next few (?) wears, that the industrial and commercial users of oil who no wish to convert to gas are being refused supplies by British Gas.

Tehre can be little doubt that the answer to the domestic demand, which is used as the excise for lack of further availability to the other sectors, could be rapidly overcome by an urgent programme of combined heat and power generation when the waste heat can be used to meet the demands for central heating and domestic hot water, as in Pimlico. There remains, however, the immediate question of more gas for industry and commerce. Here the crux of the question is whether companies are, in fact, using gas efficiently—an assumption which Mr. Walker makes in his letter and which the chemical industry implies in its attacks on the pricing policy of gas. Unfortunately, the answer is that, with only a few exceptions, they are still wasting energy unnecessarily.

My company has been marketing in the UK for some three years the ICCO waste heat recuperator for use with gas-fired plant. Although one of our installations was awarded the Gas Energy Management Award for 1978 for the North Western Gas Area and the equipment shows a pay-back period in terms of energy saving of from one to three years (sometimes even less), yet of the hundreds of inquiries that we have dealt with, onl ya few have so far taken any action—most are still thinking about it!

It is perhaps unfortunate that British Gas is not able to take a more positive role in promoting energy-saving equipment, although it would not dispute our claims that while normal boiler plant efficiency is approximately 80 per cent, which may be increased to 85-86 per cent by the use of an economiser, the addition of an ICCO Recuperator will enable 91-95 per cent of the gas input to be utilised. Clearly gas is being wasted at plants without a recuperator, and either a saving in fuel costs is possible or the same input can be made to cope with increased production. Mr. Walker might care to investigate on behalf of his members.

M. G. Lewin.
Spur Engineering,
138, Kenley Road, SW19.

Management and unions

From Mr. A. F. Stobart

Sir,—For some nine years now I have been working on shop floors both in the UK and in Europe, and have in the past worked in Canada and the USA. The work has been concerned with improving the output from a given number of people, and improvements of between 30 and 70 per cent in output per attendance hour paid for have been achieved. I thus have some knowledge of unions and how they really think and act. The present violent reaction at the Trades Union Congress is one of fear, fear that management will be again put in effective control of events, with a resultant lessening of union power. However, the rank and file member often likes this. I have many memories of poor managements, and idle union stewards (nevertheless, loud-mouthed), once the management revealed the lack of effort on the part of these folk they frequently did not get re-elected. While management is slack, and allows time wasting, unions flourish. I once pointed out to a permanent union official that the company I was then working with was subeidising his union to the tune of £45,000 a year (for only 65 members), the cost of the various meetings in firm's time. He was appalled. The management were not giving the men enough to do in a logical fashion, so they found other pastimes.

Another union fear, nay knowledge, is that there is a most grave shortage of actual work in nearly all fields. We could produce our present national product with two thirds of the present workforce, but what happens to the remainder? We could administer industry, commerce, and government with probably half of the present staff, but what are we to do with the remainder? The unions know this is coming, they want to be sure that no blame for this state of affairs rests with them.

A final point: slack management is despised. Too much waste of time and materials leaves a shop floor utterly contemptuous of its managers. They even take to "nicking" things, and if not caught, start a steady trade. Ask any business with raw materials or finished product that has a ready sale in the "black" economy.

The remedy? There are many and various, but one starting point is to count. Financial accounting is virtually useless in these days of constantly changing prices, accounting needs to be in hours and kilogrammes, both constant units of measure. Count the useful hours of work, count the useful kilogrammes of product, compare to the hours and kilogrammes that you pay for, and do this on a daily basis in all departments and you will start finding out what's what!!

Andrew Stobart.
Manor Farm, Claydon,
Banbury, Oxfordshire.

Small is beautiful

From Mr. M. Forman.

Sir,—As managing director of a factoring company established last year to service the smaller company, and formerly the managing director of one of the leading UK factoring companies, I read the article by Nicholas Leslie on factoring ("Factoring Groups Flourish," September 3) with great interest.

Mr. Leslie refers to a small company as one with a turnover of around £500,000 per annum. Undoubtedly by some standards this is small but there are many much smaller companies who would like to achieve that size. It is precisely those companies, often with annual sales of between £75,000 and £250,000, who are helped most by the sales ledgering and credit control services provided by the factor since a Company experiencing growth through such size ranges is often relying on a small and stretched management who may of necessity relegate credit control to a lower priority than production or marketing.

Whilst generalisation is not possible as the leading factors have different criteria as to client selection, it is interesting to note that on a simple calculation (realising the pitfalls of this method) the average client size of the factors in the Association of British Factors, on the figures given by Mr. Leslie, is £771,000. Not exactly small. Perhaps all senior factoring executives should have a notice "Small is Beautiful" pinned up on their walls—as long as small is defined.

M. Forman, Managing Director,
Manson Factors,
Henrietta House,
9 Henrietta Place, W.1.

Today's Events

GENERAL

UK: Zimbabwe Rhodesia constitutional talks open at Lancaster House, London.

Engineering workers continue two-day national strikes.

Industrial civil servants strike at defence and other establishments over staging of pay offer.

Crown Agents Tribunal hearing resumes.

Mr. Gordon Brunton, Thomson British Holdings chief executive, meets National Graphical Association leaders to discuss Times closure.

National and Local Government Officers Association electricity workers consider pay offer.

Overseas: Bank of International Settlements meets in Basle.

Mr. Moshe Dayan, Israeli Foreign Minister, confers with Herr. Helmut Schmidt, West German Chancellor, in Bonn.

Mr. Husny Mubarek, Egyptian Vice President, sees President Carter at start of five-day visit to Washington.

OFFICIAL STATISTICS

Department of Trade publishes retail sales figures for August—provisional. Department of Industry issues wholesale price index numbers for August—provisional.

COMPANY RESULTS

Final dividends: Glendevon Investment Trusts. Cantors. Anglo · Albion Finance. Esperanza. Interim dividends: Metal Closures. Electrical and Industrial Securities. Barton and Sons. Beatson Clark. Pentland Industries. BL. Huntleigh. Reverlex. Ebor Industrial. Merchants Trust.

COMPANY MEETINGS

See Financial Diary on page 33.

Ellis & Everard expects to maintain profitable growth

PROJECTIONS at Ellis and Everard, industrial chemical merchant, indicate good progress. The company is confident of maintaining profitable advance and it has funds available for further highly selective acquisitions, says Mr. Anthony Everard, the chairman.

The sale during 1978-78 of its building supplies division and the subsequent purchase of the minority 30 per cent of Ellis and Everard (Chemicals), resulted in improved liquidity and at the year-end, cash held was up from £14,000 to £727,000, while bank overdrafts were down at £194,000 (£1.67m). Medium- and long-term borrowing stood at £1.36m (£1.42m).

Authorised capital spending at April 30, 1979, amounted to £0.52m (£0.95m) of which £0.48m (£0.95m) had not been committed.

The acquisition of the minority holding and, in September last year, of Domestic Chemical Company underline the group's policy of concentrating on becoming principally a chemical distribution concern. The majority of its product range consists of UK made chemicals but it is also active in seeking sources of supply abroad where these do not conflict with any contractual obligations, Mr. Everard explains.

Despite continued competition from imported chemicals and UK distributors, the group is confident of winning an increasingly profitable share of the small lot industrial chemicals market in this country.

Ellis and Everard (Chemicals), which is a substantial supplier of chemicals for municipal pools, is extending the service to private pool owners. The swimming pool division is at present a relatively small enterprise but capable of profitable growth, the chairman says. However its expansion will be controlled and it will remain small compared with the group's mainstream activities.

On sales of £22.12m (£42.02m) group profit for the year to April 30, was marginally lower at £1.25m (£1.29m) but the contribution from the chemical division was up 15 per cent at £1.03m on sales 22 per cent higher at £22.1m.

Most of this divisions profit was earned by the larger well established branches with some of the smaller newer ones having difficulty in breaking even. Gross margin was maintained but a small rise in expenses reduced the divisions net profit slightly.

Group pre-tax profit was ahead to £1.05m (£0.97m) and export sales were better at £0.57m against £0.34m. The net dividend is raised to 5.57p (5p)—as reported with results on August 7.

Property, plant and machinery at year end was down at £3.36m (£5.27m) and investments were higher at £0.69m (£97,000). Ex-gratia payments totalling £32,500 were made to two former directors.

Meeting, Leicester, on October 3 at noon.

BOARD MEETINGS

The following companies have notified dates of Board meetings to the Stock Exchange. Such meetings are usually held for the purpose of considering dividends. Official indications are not available as to whether dividends are interims or finals and the sub-divisions shown below are based mainly on last year's timetable.

TODAY

Interims: Barton and Sons, Beatson Clark, Elbar Industrial, Electrical and Industrial Securities, Huntleigh, Merchants Trust, Metal Closures, Pentland Industries, Revertex Chemicals.

Finals: Anglo-African Finance, Cantors, Esperanza, Glendevon Investment Trust.

FT Share Information

The following securities have been added to the Share Information service appearing in the Financial Times:

Allstate Explorations (Section: Overseas—Australia).

Bond Corporation (Overseas—Australia).

Charter Company (Overseas—New York).

Cherokee Resources (Overseas—Canada).

Novo Industri A/S ("B" Shares) (*Chemicals*).

SPS Technologies (Overseas—New York).

Charnos advance to £0.73m

FOR 1978, profits before tax of Charnos improved from £607,476 to £733,615 on increased turnover of £15.99m compared with £14.51m.

And for the first half this year, group sales are again well ahead of those in 1978, Mr. R. Noskwith, the chairman says.

Tax last year took £346,824 against £231,388 giving earnings per share of 18.11p compared with 17.58p. The dividend on the privately-held ordinary share capital is again 1.05625p.

The chairman says the profit result cannot be regarded as satisfactory because of its dependence on Government subsidies. The 10.2 per cent sales increase would have been greater but for a drop in sales from the knitwear division, he adds.

The group has made a large investment in new knitting and ancillary machinery for the hosiery division as well as new machinery for yarn texturising. However, the double jersey side is still making losses and its future is under review, the chairman says.

Sales and profits of the lingerie division are expected to show a considerable advance this year but knitwear which again made a substantial loss last year is still showing no improvement during the current year.

Meeting, Ilkeston, September 28 at 3 pm.

WEDNESDAY'S AND THURSDAY'S UK COMPANY NEWS

GRE

An increase in profits over the first half of the year is reported by Guardian Royal Exchange Assurance, despite a deterioration in underwriting results following the severe winter.

Premiums written in the first accident and marine accounts rose by 4 per cent from £331.3m to £368.5m. But the strengthening of sterling depressed premium income by £22m—the underlying growth rate being 10.8 per cent.

The underwriting loss amounted to £8.8m compared with £6.1m for the first half of 1978. However, investment income rose by 14.2 per cent from £35.8m to £40.9m, with a true growth rate of 25.4 per cent. Pre-tax profits advanced by 7.2 per cent from £29.3m to £31.4m and net profit by 11.6 per cent from £14.7m to £16.4m.

The UK was worst affected with the underwriting loss increased from £2.8m to £4.3m. Although a useful recovery took place in the second quarter, the effects of the VAT increase on outstanding claims held back the improvement.

The results in Germany were also affected by bad weather. Nevertheless, there was a slight improvement in underwriting with a loss of £3.3m against £3.7m in 1978.

Good results were recorded in Canada, where underwriting moved from a break-even position to a profit of £600,000. Results were also good in Brazil, East Africa, Hong Kong, Malaysia and South Africa, but deteriorated in France and Spain.

Life business advanced satisfactorily over the first half of the year, with new annual premiums rising by one quarter from £12.8m to £16m and new single premiums by over 60 per cent from £6.5m to £10.6m.

The interim dividend is raised from 4.6585p to 5p per share—the final last year was 6.9415p.

R. & H. Hall

FIRST HALF 1979 pre-tax profits of R. and H. Hall, Ireland-based grain merchant, finished £160,000 better at £1.44m and the directors say the full year result should be as good if not slightly above last year's £2.35m.

Half-year earnings are higher at 4.36p (4.02p) per 25p share and the net interim dividend is raised from 0.4575p to 0.75p. The directors state that this is to reduce disparity with the final. Last year's total was 2.74625p.

Turnover jumped from £42.35m to £61.78m but the high level is not expected to be repeated in the second half. Profits included share of associates of £540,000 (£649,000), tax took £719,000 (£815,000) and there was an exchange translation gain of £62,000.

Hepworth Ceramic

AT THE same time as reporting a slight improvement in first half 1979 profits, Hepworth Ceramic Holding announces a rights issue to raise £28m. The issue, which is underwritten, is on a one-for-four basis at 98p per share.

Profits before tax for the half-year were £15.28m (£14.88m) on turnover up from £123.54m to £130.27m. The results were depressed because the group has been badly affected by this winter's industrial unrest and severe weather.

The directors point out that at the end of January, management accounts showed little more than break-even position and one month later the group was over £2.5m behind the profit plan.

They say results for July and August are satisfactory, but the difficult trading conditions in which the group has operated for the past five years still persist.

Stated half-yearly earnings per 25p share rose by 1.8p to 8.7p, while the interim dividend, for which new shares do not rank, is lifted to 2.25p (1.75p). A final of 2.65p is forecast on the increased capital, making a 30 per cent total increase in gross terms—in 1978, net payments totalled 3.685p on record £30.4m pre-tax profit.

	First half 1979 £000	First half 1978 £000
Turnover	130,271	123,541
Depreciation	4,494	3,867
Trading profit	16,153	15,502
Profit before tax	15,283	14,880
Tax	4,267	6,202
Net profit	11,016	8,678
Exchange losses	33	96

Investing in Success

Gross revenue of "Investing in Success" Equities improved slightly from £447,659 to £455,667 for the six months ended July 31, 1979, while the amount available for ordinary holders went ahead from £156,539 to £209,784.

Expenses and interest were reduced from £230,621 to £174,216 and tax took £71,667 (£80,499).

An interim dividend of 1.05p (0.9045p) net, costing £64,280 (£55,355), has already been announced—last year's total was 3.35p from £237,411 revenue.

At the half year, net asset value is shown at 213.08p per 25p share, compared with 242.21p at January 31, 1979.

London Utd.

Because of a softening in premium rates and the decline in the value of the dollar, taxable profits of London United Investments fell in the first six months of 1979 from £1.61m to £1.45m, on a reduced turnover of £7.37m against £8.05m.

However, the directors say there is every indication that the insurance market has bottomed out and that rates once more will attain a more realistic level.

The joint ventures, established in 1978 and 1979, will serve the company in good stead for the future, they state. In addition, by the end of the year the company hopes to conclude further agreements which will lead to more expansion in the U.S. and a new venture in Europe.

Despite gloomy forecasts which are being made about the insurance industry as a whole, the directors say the company is now in a stronger position than every before and they feel the future can be faced with confidence.

The net interim dividend is stepped up from 2.5p to 4p per 20p share—last year, payments totalled 5.3125p on £3.85m pre-tax profit.

Tax for the half-year took £693,000 (£804,000) and there were extraordinary debits of £21,000 (£1,000).

Montfort

Profits before tax of Montfort (Knitting Mills) advanced from £269,286 to £399,051 for the first half of 1979, on turnover ahead by £0.63m to £5.34m.

On second half prospects, the directors say the domestic trading remains highly competitive, while exporting has become more difficult due to the strength of sterling.

Earlier retail optimism has lessened in some instances, stocks in all sectors have increased, and a reduction in the flow of new orders seems inevitable.

Nevertheless, they add that the company's existing bookings are sufficient to enable full production to be maintained and ensure the realisation of their May forecast for a substantial increase in full year profits.

For 1978, the company reported a record pre-tax profit of £528,000 (£318,000).

The net interim dividend is stepped up from 1.088p to 1.275p per 25p share—last year's final was 2.837p.

With SSAP 15 applied, tax for the period takes £151,998 (£103,083) giving net profits up from £166,203 to £247,053. Comparisons have been adjusted.

Morgan Crucible

FOR the six months to July 1, 1979, sales of Morgan Crucible Company, improved from £49.85m to £54.88m and pre-tax profits were higher at £6.89m compared with just over £6m in the same period last year.

After tax of £3.65m, against £2.74m, earnings per share are stated as 9.9p, against 7.5p, and the interim dividend is stepped up from 3.653p to 4.5p. The total last year was 6.376p from pre-tax profits of £12.58m.

The directors say that Rocol, George Rowney and Co. and M. B. Metals are showing well in a strong division. Australia and South-East Asia also have useful market strength.

They also remind shareholders of the importance of Morgan materials to conservers of energy in the high temperature field—in particular, Ceramic Fibres (Triton) which in 1979 should achieve a high level of sales.

The insurance claims arising from the fire at the Liege factory of Morganite Ceramic Fibres in April, 1978, have been settled for a total sum of BFr 78m (approximately £1.2m) of which about £300,000 will be taken as a credit to trading profit in the third quarter of 1979.

The Board says that if results of overseas subsidiaries had been expressed in sterling at the exchange rates ruling in December 31, 1978, the effect would have been to increase sales by £2.22m and trading profit by £232,000.

Newbold and Burton

A 28 per cent increase in profits is reported by Newbold and Burton Holdings, the women's footwear manufacturer, in the first half of 1979. The taxable surplus rose from £219,000 to £276,000 on turnover ahead 16 per cent at £5.2m.

And the Board says that excellent order books and higher levels of production makes it confident for the second-half. In 1978 the group pushed up total pre-tax profits from £468,000 to a record £699,000.

The interim dividend is lifted from an adjusted 0.9555p net per 25p share to 1.4p. Last year's final payment was 1.5267p.

Tax for the half-year takes £144,000 (£114,000) leaving net profit up from £105,000 to £132,000. The dividend absorbs £59,000, compared with £40,000.

The group's freehold properties have ben professionally revalued and the substantial surplus over book value will be incorporated in the year-end accounts.

More News on Page 30

LOCAL AUTHORITY BOND TABLE

Authority (telephone number in parentheses)	Annual gross interest	Interest payable	Minimum sum	Life of bond
	%		£	Year
Barnsley (0226 203232)	12	½-year	250	3-5
Barnsley (0226 203232)	12½	½-year	250	6-10
Kirklees (0484 22133)	12	½-year	500	2-3
Knowsley (051-548 6555)	11¾	½-year	1,000	1
Knowsley (051 548 6555)	12½	½-year	1,000	5-7
Redbridge (01-478 3020)	12	½-year	200	4-5
Redbridge (01-478 3020)	12½	½-year	200	6-7

EUROBONDS

The Financial Times regrets that the Association of International Bond Dealers' Eurobond Quotations and Yields, as at August 31, will now appear on September 17, instead of September 10 as previously advertised.

FINANCE FOR INDUSTRY TERM DEPOSITS

Deposits of £1,000-£50,000 accepted for fixed terms of 3-10 years. Interest paid gross, half-yearly. Rates for deposits received not later than 14.9.79.

Terms (years)	3	4	5	6	7	8	9	10
Interest %	12	12	12½	12½	12½	12½	12½	12½

Deposits to and further information from The Chief Cashier, Finance for Industry Limited, 91 Waterloo Road, London SE1 8XP (01-928 7822, Ext. 367). Cheques payable to "Bank of England, a/c FFI." FFI is the holding company for ICFC and FCI.

Rates paid W/E Sept. 9th, 1979

	Call % p.a.	7-day % p.a.
Mon.	13.868	14.012
Tues.	13.831	13.997
Wed.	13.276	13.999
Thur	13.562	14.033
Fri./Sun.	13.494	14.020

هكذا الأصل

INTNTL. COMPANIES and FINANCE

Engelhard agrees purchase of Barber Oil

NEW YORK — Engelhard Minerals and Chemicals Corporation and Barber Oil Corporation have agreed in principle for Engelhard to acquire Barber for $55 in cash per share of Barber common stock. The aggregate consideration would be about $147.3m.

The transaction would take the form of a merger of Barber into a wholly owned subsidiary of Engelhard. Engelhard's acquisition of Barber is subject to the negotiation and execution of a definitive agreement satisfactory to directors of both parties, the approval of the transaction by the stockholders of Barber, certain regulatory approvals, certain changes in Barber's shipping operations and to a purchase investigation by Engelhard.

Third quarter earnings for Engelhard are expected to be "considerably above those for any other quarter in its history," according to Mr. Milton F. Rosenthal, the chairman.

The company earned $37m or $1.17 per share in last year's third quarter. Mr. Rosenthal also said that the company would consider an increase in its dividend in the fourth quarter, because of its higher earnings. It has been paying 35 cents a quarter. Fourth quarter results are expected to be "very satisfactory."

Net earnings for the first seven months of this year already exceeded those for all of 1978, when the company earned $142.2m.

The current surge in revenues and earnings was led by the company's Philipp Brothers division, which trades in more than 150 basic industrial raw materials.

Mr. Rosenthal confirmed that Mr. Mark N. Kaplan, the company's president and chief operating officer, might be leaving.

Engelhard will spend $75m on capital projects this year, a substantial 50 per cent increase over each of the two preceding years.

Agencies

Exports counter impact of strike on Thyssen profits

BY JONATHAN CARR IN BONN

THYSSEN, the diversified steel group which is West Germany's largest producer, seems set for an increase in profits this business year, to September 30 —despite the 44-day steel strike at the turn of 1978-79.

Group external sales rose by 8 per cent to DM 18.4bn ($10.2bn) in the first three quarters of the year, as compared with the same period of 1977-78. This boost to business meant that the impact of the strike on earnings could be "in large measure" counterbalanced. The improvement had continued into the last quarter.

Last year Thyssen, in common with its main European rivals, continued to suffer from the impact of economic recession, saw a fall in profitability, and reduced its dividend—to DM 4 per share from DM 5.50.

In the first nine months of this year, turnover has been particularly buoyant in the special steels sector, where sales rose by 14 per cent to DM 2bn, and in the trading and services field, which saw a rise of 15 per cent to DM 9.4bn.

The company also notes that orders to its subsidiary, Thyssen Industrie were up strongly —particularly in the machinery and mining equipment sectors —but that so far these had only partly worked through to affect the sales figures.

Sales of Thyssen's domestic companies rose by 6 per cent to DM 14.8bn—of which almost one-third went to export. Worldwide, the group employed 154,600 people on June 30—a drop of 2.5 per cent against a year earlier. A total of 126,775 are employed in West Germany.

Nippon Steel upturn

BY RICHARD C. HANSON IN TOKYO

NIPPON STEEL expects its operating profit and sales in the half-year to September 30 to reach record levels so allowing for the payment of an interim dividend for the first time in three years. The company predicted, however, that conditions would deteriorate sharply in the second-half, mostly because of higher oil prices.

The company, the largest integrated steelmaker in the world, said that operating profit would rise to about Y95-100bn (around $440m), from Y66.5bn in the second half of last year and only Y15.6bn in the comparable year ago period.

Sales for the first half, boosted by improved prices and shipments, would rise to about Y1,340bn ($6.1bn), from Y1,146bn a year earlier.

The previous record for operating (pre-tax) profits was set in the first-half of 1973 at Y78.1bn.

The company is expected to re-instate a 10 per cent cash dividend (on an annual basis) which will be up from the 8 per cent dividend last fiscal year. A formal decision on the amount will be made in November.

Leasing consortium in Bahrain

By Michael Lafferty

A CONSORTIUM of Middle East financial interests has launched a new leasing company which will be based in Bahrain.

The consortium includes BAII-Hill Samuel Corporation, a joint venture between Hill Samuel, the City merchant bank, and Banque Arabe et Internationale d'Investissement, a Paris-based joint venture between Arab governments and financial institutions and non-Arab banks.

Operating under the name of Arab Leasing (Holding), the company will be registered in Luxembourg.

The other shareholders are Abu Dhabi Investment Authority, Arinfi, BAII Trust, Competrol Establishment, Kuwait International Investment Company, Kuwait Projects Company and the Public Institution for Social Security (of Kuwait).

Approval for Edeka plan

BY LESLIE COLITT IN BERLIN

WEST GERMANY'S largest supermarket chain, Edeka, is being permitted by the West German Cartel Office to take over the supermarket operations in the Horten chain of department stores.

The Cartel Office in Berlin had expressed concern over the "process of concentration" in West German food retailing, arguing that in the foreseeable future there would be only 10 or 12 independent purchasing groups, which would put independent grocers at a disadvantage.

In giving the green light to the merger, the Cartel Office says that it will not lead to a "dominating market position." It notes that Edeka in its countrywide operations does not at present "tower over" other West German chains.

Last year, the large Spar food chain took over the food sections in 11 department stores belonging to West Germany's biggest department store group, Hertie.

Edeka, with headquarters at Hamburg, had a turnover last year of DM 7.24bn ($4bn) while the Dusseldorf-based Horten had sales of DM 3.28bn.

Desco acquisition

The Zurich-based international trading company, Desco, part of the Schulthess Holding AG group, has acquired a controlling interest in the watch manufacturer, Girard-Perregaux SA, of La Chaux-de-Fonds, writes John Wicks from Zurich.

PENDING DIVS.

For the convenience of readers the dates when some of the more important company dividend statements may be expected in the next few weeks are given in the following table. The dates shown are those of last year's announcements, except where the forthcoming Board meetings (indicated thus*) have been officially published. It should be emphasised that the dividends to be declared will not necessarily be at the amounts or rates per cent shown in the column headed "Announcement last year."

	Date	Announcement last year
*Armstrong Equipment	Sept. 25	1.465
*BSR	Sept. 12	Int. 1.413
*Babcock and Wilcox	Sept. 12	Int. 2.931
Bk. Scotland	Sept. 19	Int. 6.082
*Barratt Devs.	Sept. 25	Final 5.53
Ball (A.)	Sept. 14	Final 2.682
Bilton (P.)	Sept. 26	Int. 3.375
*Blackwood Hodge	Sept. 11	Int. 1.3
*Booker McConnell	Sept. 13	Int. 3.95
*Bowater	Sept. 11	Int. 4.08
*British Vita	Sept. 13	Int. 1.07
Brittains	Sept. 8	Int 0.7
*Brown Boveri Kent	Sept. 20	Int. 1
*Carpets Int.	Sept. 12	Int. 1.675
*Croda Intl.	Sept. 20	Int. 1.081
Dalgety	Sept. 14	Final 6.632
*Danish Bacon	Sept. 13	Int. 3.127
*Decca	Sept. 13	Final 8.596
Delta Metal	Sept. 21	Int. 1.82
*Dutton-Forshaw	Sept. 13	Int. 1.25
Eagle Star	Sept. 20	Int 3.35
European Ferries	Sept. 18	Int. 1.1
Expanded Metal	Sept. 19	Int. 1.75
*Fisons	Sept. 24	Int. 5.669
*Gibbons Dudley	Sept. 13	Int. 0.74328
*Guest Keen	Sept. 20	Final 5.58
*Guinness Peat	Sept. 19	Final 6.0
Harris and Sheldon	Sept. 20	Int. 1.578
Harrison's Malaysn. Estates	Sept. 11	Sec. Int. 2.75
*Hestair	Sept. 20	Int. 2.358
Johnson & Firth Brown	Sept. 14	Final 3.459
*Kleinwort Benson	Sept. 25	Int. 1.8
Laing (J.)	Aug 31	Int. 1
Laporte Inds.	Sept. 20	Int 3.0217

	Date	Announcement last year
*Law Land	Sept. 18	Int. 0.5
*Lead Inds.	Sept. 13	Int. 3.3
Lister	Sept. 21	Final 1
Liverpool Daily Post	Sept. 13	Int. 3.012
*Low and Bonar	Sept. 17	Int. 4.0
MFI Furniture	Sept. 19	Final 1.206
Matthews Wrightson	Aug. 31	Int. 3.5552
*Metal Closures	Sept. 10	Int. 1.9
Mills and Allen Int	Aug. 31	Final 5
*Molins	Sept. 19	Int. 2.2
Newman Inds.	Sept. 26	Int. 1.5
*Ofrex	Sept. 11	Int. 1.18
*Pearson Longman	Sept. 13	Int. 3.0
*Pearson (S.)	Sept. 13	Int. 3.0
Plantation Hldgs	Sept. 20	Sec. Int. 0.402
*Prudential Corpn.	Sept. 13	Int. 4.198
Ransome Sims & Jefferies	Sept. 21	Int. 3
*Reckitt and Colman	Sept. 11	Int. 5.2
Rio Tinto-Zinc	Sept. 20	Int. 3.5
*Rockware	Sept. 12	Int. 2.228
*Rolls-Royce	Sept. 18	Int. 2.24
Rowntree Mackintosh	Sept. 20	Int. 4.5
Sedgwick Forbes	Aug. 24	Int. 4.0
Selecm. Tst.	Sept. 21	Int. 5
Simon Eng.	Sept. 18	Int. 3
*Steetley	Sept. 20	Int. 2.733
*Tarmac	Sept. 25	Int. 3.988
Tate & Lyle	Sept. 20	Sec. Int. 8.35
*Tilling (T.)	Sept. 12	Int. 2.2
*Utd. Biscuits	Sept. 17	Int. 1.5
*Ward White	Sept. 20	Int. 1.34

* Board meeting intimated. † Rights issue since made. ‡ Tax free. § Scrip issue since made. ¶ Forecast.

BASE LENDING RATES

A.B.N. Bank	14 %
Amro Bank	14 %
American Express Bk.	14 %
Henry Ansbacher	14 %
A P Bank Ltd.	14 %
Associates Cap. Corp.	14 %
Banco de Bilbao	14 %
Bank of Credit & Cmce.	14 %
Bank of Cyprus	14 %
Bank of N.S.W.	14 %
Banque Belge Ltd.	14 %
Banque du Rhone et de la Tamise S.A.	14½%
Barclays Bank	14 %
Bremar Holdings Ltd.	15 %
Brit. Bank of Mid East	14 %
■ Brown Shipley	14 %
Canada Perm't Trust	14 %
Cayzer Ltd.	14 %
Cedar Holdings	14 %
■ Charterhouse Japhet	14 %
Choulartons	14 %
C. E. Coates	14 %
Consolidated Credits	14 %
Co-operative Bank	*14 %
Corinthian Secs.	14 %
Credit Lyonnais	14 %
The Cyprus Popular Bk.	14 %
Duncan Lawrie	14 %
Eagil Trust	14 %
English Transcont.	14 %
First Nat. Fin. Corp.	15½%
First Nat. Secs. Ltd.	15½%
■ Antony Gibbs	14 %
Greyhound Guaranty	14 %
Grindlays Bank	‡14 %
■ Guinness Mahon	14 %
■ Hambros Bank	14 %
■ Hill Samuel	§14 %
C. Hoare & Co.	†14 %
Julian S. Hodge	15 %
Hongkong & Shanghai	14 %
Industrial Bk. of Scot.	14½%
Keyser Ullmann	14 %
Knowsley & Co. Ltd.	15½%
Lloyds Bank	14 %
London Mercantile	14 %
Edward Manson & Co.	15 %
Midland Bank	14 %
■ Samuel Montagu	14 %
■ Morgan Grenfell	14 %
National Westminster	14 %
Norwich General Trust	14 %
P. S. Refson & Co.	14 %
Rossminster	14 %
Ryl. Bk. Canada (Ldn.)	14 %
Schlesinger Limited	14 %
E. S. Schwab	15 %
Security Trust Co. Ltd.	15 %
Shenley Trust	16 %
Standard Chartered	14 %
Trade Dev. Bank	14 %
Trustee Savings Bank	14 %
Twentieth Century Bk.	15 %
United Bank of Kuwait	14 %
Whiteaway Laidlaw	14½%
Williams & Glyn's	14 %
Yorkshire Bank	14 %

■ Members of the Accepting Houses Committee.
* 7-day deposits 11½%, 1-month deposits 11¾%.
† 7-day deposits on sums of £10,000 and under 11½%, up to £25,000, 12% and over £25,000 12¼%.
‡ Call deposits over £1,000 11½%.
§ Demand deposits 11½%.

RECENT ISSUES

EQUITIES

Issue Price p	Amount Paid Up	Latest Renunc. Date	1979 High	1979 Low	Stock	Closing Price p	+ or −	Div. or Amount	Times Covered	Gross Yield	P.E. Ratio
¶¶	F.P.	24.8	75	63	Arrow Chemicals	71	+1	b2.0	3.3	4.1	15.9
¶¶	F.P.	—	88½	80	Barlow Hldgs.	87		T2.6	1.1	4.3	50.3
160	F.P.	5.9	190	185	Mercantile House	188		10.72	2.3	8.1	7.7
¶¶	F.P.	10.8	37	26	Mettoy Dfd.	34	—	—	—	—	—
¶¶	F.P.	—	37	30	St. George Assets 10p	35		bd1.0	1.5	4.1	32.
¶¶	F.P.	—	200	170	Seltrust A. 5oc.	170	−2	—	—	—	—
160	F.P.	8.8	224	193	Standard Tel. & Cables	224	+4	b8.0	2.1	5.3	13.3

FIXED INTEREST STOCKS

Issue Price	Amount Paid up	Latest Renunc. Date	1979 High	1979 Low	Stock	Closing Price	+ or −
¶91	F.P.	21.9	87	85	Aurora 8¼ Conv. Cum. Pref.	85	
¶¶	F.P.	21.9	106p	101p	Bradford Prop. 10½% Cum. Pref.	106p	
100	F.P.	20.7	101¼	92	English & Overseas Inv. Conv.	95	
¶96½	£10	29.11	12¼	8⅞	Essex Water 8% Red. Pref. 1984	11¼	
¶¶	F.P.	—	73½	70	Lonrho 9% 2nd Mort. Deb. 87 92	71½	
¶¶	F.P.	—	90½	86	Do. 12% 2nd Mort. Deb. 85 90	89½	
¶¶	F.P.	—	99	93	Do. 12% 2nd Mort. Deb. 80-85	96½	
97	F.P.	24.9	99¼	97¼	Scot. Agricultural Sec. 13% Deb. 97-99	99½	
100p	—	7.9	103p	100p	Stonehill 10% Cum. Prf.	103p	
¶98	F.P.	24.8	101½	100½	Sund. & S. Shields Water 8% 1986	101¼	
¶98	F.P.	18.10	101¾	98½	Wrexham Water 8% 1984	101¼	

"RIGHTS" OFFERS

Issue Price p	Amount Paid up	Latest Renunc. Date ●	Latest Renunc. Date ■	1979 High	1979 Low	Stock	Closing price p	+ or −
14	F.P.	23.8	21.9	19	17	Abwood Machine Tools	18	
25	F.P.	24.8	14.9	90	78	Bank & Commercial	90	−2
110	F.P.	4.9	19.10	130	125	Bank Leumi	130	
A$2	Nil	—	—	60pm	37pm	Bank of New South Wales	56pm	−1
21	F.P.	—	—	26	24½	Dares Estates	25	
125	Nil	—	—	22pm	17pm	Estates Property Inv	22pm	
R1.20	Nil	—	—	2pm	1pm	F.U.G.I.T.	1pm	
115	F.P.	20.8	21.9	138	124	Hay's Wharf	136	
10	F.P.	6.7	7.9	118	107	Intl. Timber	117	
80	F.P.	—	—	43	36	Lennons	42pm	−1
110	F.P.	6.9	26.9	135	120	Letraset	135	−5
5	F.P.	29.8	18.9	12½	3	London Inv. Trust	12½	+½
116	Nil	—	—	20pm	15½pm	Macarthys Pharm.	20pm	
¶¶	Nil	—	—	90pm	76pm	Seltrust	84pm	
145	Nil	15.9	19.10	73pm	42pm	Unitech	73pm	+6
10	F.P.	5.9	17.10	13	11	Yorkgreen Invs.	11	

Renunciation date usually last day for dealing free of stamp duty. b Figures based on prospectus estimate. g Assumed dividend and yield. u Forecast dividend: cover based on previous year's earnings. F Dividend and yield based on prospectus or other official estimates for 1979. Q Gross. T Figures assumed. ‡ Cover allows for conversion of shares not now ranking for dividend or ranking only for restricted dividends. § Placing price to public. pt Pence unless otherwise indicated. ¶ Issued by tender. || Offered to holders of ordinary shares as a "rights." ** Issued by way of capitalisation. §§ Reintroduced. ¶¶ Issued in connection with reorganisation, merger or takeover. || Introduction. □ Issued to former preference holders. ■ Allotment letters (or fully-paid). ● Provisional or partly-paid allotment letters. ★ With warrants. †† Unlisted security. ‡‡ Issued as units comprising 2 Income shares and 10 Capital shares at 125p per unit.

Public Works Loan Board rates

Effective from September 8

Years	Quota loans repaid by EIP†	Quota loans repaid At‡	Quota loans repaid at maturity§	Non-quota loans A* repaid by EIP†	Non-quota loans A* repaid At‡	Non-quota loans A* repaid at maturity§
Up to 5	12¼	13¼	12¾	13¼	13¾	12⅞
Over 5, up to 10	12⅞	12¼	12¾	12⅞	13	13¼
Over 10, up to 15	12⅞	12⅞	12⅞	13⅛	13⅛	13¼
Over 15, up to 25	12⅞	12⅞	12⅞	13¼	13¼	13¼
Over 25	12⅞	12⅞	12⅞	13¼	13¼	13¼

* Non-quota loans B are 1 per cent higher in each case than non-quota loans A. † Equal instalments of principal. ‡ Repayment by half-yearly annuity (fixed equal half-yearly payments to include principal and interest). § With half-yearly payments of interest only.

CORAL INDEX: Close 471-476

INSURANCE BASE RATES

† Vanbrugh Guaranteed .... 12 %
† Property Growth 11¼%
† Address shown under Insurance and Property Bond Table.

Companies and Markets

CURRENCIES, MONEY and GOLD

Gold's meteoric rise

BY COLIN MILLHAM

Profit taking became evident in the London bullion market last Thursday afternoon, following a sharp rise in the morning as a result of the success of the International Monetary Fund's latest gold auction.

The reasons behind the meteoric rise in gold's value remain shrouded in mystery, but both recent auctions by the IMF and the U.S. Treasury have led to sharp upward movement on the open market as demand at the auctions has far exceeded supply.

The 444,000 ounces offered last Wednesday attracted bids of 1.65m ounces, while bids at the earlier Treasury auction totalled 2.26m for 750,000 ounces.

During the two weeks separating the auctions the gold price rose $32. The result of the IMF auction, where the average price paid was $333.24 an ounce, set off a wave of buying, just as news that Dresdner Bank had scooped almost the entire Treasury offering did in August, but then the average price was a mere $301.8.

Dresdner Bank was rumoured to be acting for Middle Eastern interest, but the bank denied that its clients were exclusively Arab oil producers, suggesting that demand was much more wide spread.

This was certainly true last Thursday morning when buying was so hectice that the price shot up another $7 to be fixed at $340.85, touching on an all time high of $343, before the selling began. Profit taking continued on Friday, with the metal falling to $331.37½, but once this inevitable selling is out of the way, and if the mood of financial markets remains the same, then $350 may not be far away.

Surplus Middle East held dollars, lack of faith in paper money, and fears about international inflation rates, are all mentioned as possible reasons behind gold's attraction. Silver has also been in great demand, often seeming to lead the way in front of gold. After touching $12½ last Thursday, rise of almost 40 per cent since the beginning of August, silver also declined on Friday to around $12 an ounce.

GOLD

	Sept. 7	Sept. 6
Gold Bullion (fine ounce)		
Close	$331-331¼ (£147.1-147.4)	$334½-335¼ (£148.8-149.1)
Opening	$328½-329¼ (£146.2-146.8)	$338¼-339 (£150.8-150.9)
Morning fixing	$331.15 (£147.574)	$340.85 (£151.605)
Afternoon fixing	$329.15 (£146.321)	$335.50 (£149.310)
Gold Coins, domestically		
Krugerrand	$337-339 (£149¾-150¾)	$345-347 (£153¾-154¼)
New Sovereigns	$85½-87½ (£38-39)	$86½-88½ (£38½-39½)
Old Sovereigns	$116½-118½ (£51¾-52¾)	$118-120 (£52½-53½)
Gold Coins, internationally		
Krugerrand	$337-339 (£149¾-150¾)	$345-347 (£153¾-154¼)
New Sovereigns	$85½-87½ (£38-39)	$86½-88½ (£38½-39½)
Old Sovereigns	$116½-118½ (£51¾-52¾)	$118-120 (£52½-53½)
$20 Eagles	$475-480	$482-487
$10 Eagles	$261-266	$288-293
$5 Eagles	$236-241	$243-248

CURRENCY RATES

Sept. 7	Bank rate %	Special Drawing Rights	European Currency Unit
Sterling	14	0.580225	0.619828
U.S. $	10½	1.30394	1.39399
Canadian $	11¼	1.52118	1.62707
Austria Sch.	3¾	n/a	18.2056
Belgian F.	9	37.9055	40.5269
Danish K.	9	—	7.28780
D Mark	5	2.36274	2.52522
Guilder	6	2.59680	2.77614
French Fr.	9½	5.51241	5.89172
Lira	10½	1059.45	1132.27
Yen	5¼	287.910	308.003
Nrwgn. K.	7	6.51383	6.97276
Spanish Pes.	8	86.1461	92.1012
Swedish Kr.	7	5.47916	5.86645
Swiss Fr.	1	2.13194	2.27570

OTHER MARKETS

Sept. 7	£	$		£ Note Rates
Argentina Peso	3204-3224	1425-1435	Austria	29½-30½
Australia Dollar	1.9855-1.9955	0.8835-0.8855	Belgium	[illegible]
Brazil Cruzeiro	61.83-62.83	27.45-27.90	Denmark	11.70-11.85
Finland Markka	8.61-8.63	3.8265-3.8355	France	9.46-9.55
Greek Drachma	81.767-83.725	36.35-36.50	Germany	4.05-4.15
Hong Kong Dollar	11.39-11.41	5.0725-5.0775	Italy	1,810-1,850
Iran Rial	157.40-165.20	70-73½	Japan	495-505
Kuwait Dinar (KD)	0.615-0.625	0.2762-0.2763	Netherlands	4.45-4.55
Luxembourg Frc.	65.40-65.50	29.06-29.08	Norway	11.20-11.35
Malaysia Dollar	4.835-4.845	2.1500-2.1540	Portugal	108-114
New Zealand Dlr.	2.2125-2.2225	0.9865-0.9895	Spain	146-149
Saudi Arab. Riyal	7.48-7.58	[illegible]	Switzerland	3.65-3.75
Singapore Dollar	4.825-4.835	2.1470-2.1510	United States	2.23-2.24½
Sth. African Rand	1.8680-1.8780	0.8330-0.8340	Yugoslavia	46-48

Rate given for Argentina is free rate.

THE DOLLAR SPOT AND FORWARD

Sept. 7	Day's spread	Close	One month	% p.a.	Three months	% p.a.
UK†	2.2435-2.2520	2.2495-2.2505	0.37-0.27c pm	1.71	0.83-0.73 pm	1.39
Ireland†	2.0740-2.0750	2.0755-2.0785	1.05-0.85c pm	5.49	2.70-2.40 pm	4.91
Canada	1.1670-1.1685	1.1680-1.1685	0.06-0.03c pm	0.46	0.18-0.14 pm	0.55
Nethlnd.	1.9890-1.9940	1.9900-1.9930	0.47-0.37c pm	2.53	1.48-1.38 pm	2.87
Belgium	29.07-29.10	29.07-29.09	1.5c pm-par	0.31	4.5-2.5 pm	0.48
Denmark	5.2300-5.2335	5.2305-5.2320	2.45-2.95ore dis	−6.19	5.75-6.25dis	−4.59
W. Ger.	1.8070-1.8135	1.8075-1.8085	0.77-0.67pf pm	4.78	2.30-2.20 pm	4.98
Portugal	49.03-49.13	49.03-49.08	25-35c dis	−7.34	75-115 dis	−7.73
Spain	66.07-66.15	66.10-66.15	65-85c dis	−13.61	190-210dis	−12.10
Italy	812.40-812.90	812.40-812.70	0.40-0.70lire dis	−0.81	3.90-4.40dis	−0.20
Norway	[illegible]	5.0040-5.0050	0.20-0.70ore dis	−1.08	0.30pm-0.20dis	0.20
France	4.2200-4.2305	4.2200-4.2220	0.27-0.17c pm	0.62	0.17-0.07 pm	0.11
Sweden	4.2010-4.2030	4.2015-4.2025	0.10orepm-0.20dis	−0.14	0.40-0.60dis	−0.47
Japan	220.50-221.50	220.50-220.70	1.05-0.90y pm	5.30	3-2.85 pm	5.30
Austria	13.04-13.25½	13.06½-13.07½	5.60-5.10gro pm	4.91	16-14.50 pm	4.67
Switz.	1.6250-1.6395	1.6255-1.6275	1.38-1.31c pm	9.85	4.14-4.09 pm	10.12

† UK and Ireland are quoted in U.S. currency. Forward premiums and discounts apply to the U.S. dollar and not to the individual currency.

THE POUND SPOT AND FORWARD

Sept. 7	Day's spread	Close	One month	% p.a.	Three months	% p.a.
U.S.	2.2435-2.2520	2.2495-2.2505	0.37-0.27c pm	1.71	0.83-0.73 pm	1.39
Canada	2.6180-2.6280	[illegible]	0.52-0.42c pm	2.15	1.35-1.25 pm	1.98
Nethlnd.	4.46-4.49	4.47½-4.48½	2-1c pm	4.02	5¼-4¼ pm	4.14
Belgium	65.05-65.55	65.40-65.50	12-2c pm	1.28	32-22 pm	[illegible]
Denmark	11.72-11.78	11.76½-11.77½	3¼-5¼ore dis	−4.84	8¾-11¼ dis	−3.56
Ireland	1.0810-1.0840	1.0815-1.0825	27-37p dis	−3.55	90-100 dis	−3.51
W. Ger.	4.05½-4.09	4.06¾-4.07¾	2⅞-1⅞pf pm	7.00	7⅞-6⅞ pm	6.51
Portugal	110.00-110.90	110.30-110.60	30-80c dis	−5.98	130-230 dis	−6.52
Spain	148.25-148.75	148.65-148.75	90-140c dis	−9.28	310-410 dis	−9.68
Italy	1821-1829	1827½-1828½	2 lirepm-par	0.65	1½-3½ dis	−2.86
Norway	11.19-11.27	11.26-11.27	1¼ore pm-¾ore dis	3.16	4-2 pm	[illegible]
France	9.47-9.52	9.49¾-9.50¾	2½-1½c pm	2.54	4¾-3¾ pm	1.59
Sweden	9.42-9.46½	9.44¾-9.45¾	2⅞-¾ore pm	1.59	3¾-1¾ pm	1.17
Japan	492-499	[illegible]	3.05-2.75y pm	7.01	8.50-8.15 pm	6.71
Austria	29.25-29.30	29.35-29.40	20-10gro pm	6.13	50-40 pm	6.13
Switz.	3.65-3.69	3.65½-3.66½	3⅞-2⅞c pm	11.07	11-10 pm	11.48

Belgian rate is for convertible francs. Financial franc 68.50-68.60c pm. Six-month forward dollar 1.42-1.32c pm. 12-month 2.95-2.80c pm.

EXCHANGE CROSS RATES

Sept. 7	Pound Sterling	U.S. Dollar	Deutschem'k	Japan'se Yen	French Franc	Swiss Franc	Dutch Guild'r	Italian Lira	Canada Dollar	Belgian Franc
Pound Sterling	1.	2.250	4.073	496.5	9.503	3.660	4.478	1828.	2.624	65.45
U.S. Dollar	0.444	1.	1.810	220.7	4.223	1.627	1.990	812.4	1.166	29.09
Deutschemark	0.246	0.552	1.	121.9	2.333	0.899	1.099	448.9	0.644	16.07
Japanese Yen 1,000	2.014	4.532	8.202	1000.	19.14	7.372	9.018	3682.	5.284	131.8
French Franc 10	1.052	2.368	4.286	522.5	10.	3.852	4.712	1924.	2.761	68.88
Swiss Franc	0.273	0.615	1.113	135.7	2.596	1.	1.223	499.5	0.717	17.88
Dutch Guilder	0.223	0.503	0.910	110.9	2.122	0.817	1.	408.3	0.586	14.62
Italian Lira 1,000	0.547	1.231	2.228	271.6	5.198	2.002	2.449	1000.	1.435	35.80
Canadian Dollar	0.381	0.858	1.552	189.3	3.622	1.395	1.707	696.8	1.	24.95
Belgian Franc 100	1.528	3.438	6.222	758.6	14.52	5.592	6.841	2793.	4.008	100.

LONDON MONEY RATES

Sept. 7 1979	Sterling Certificate of deposit	Interbank	Local Authority deposits	Local Auth. negotiable bonds	Finance House Deposits	Company Deposits	Discount market deposits	Treasury Bills ф	Eligible Bank Bills ф	Fine Trade Bills ф
Overnight	—	10-14	—	—	—	13¾	12-13⅝	—	—	—
2 days notice	—	—	13⅛-13⅝	—	—	—	—	—	—	—
7 days or 7 days notice	—	13⅝-13⅞	13¾-13⅞	—	14⅝	14	13⅛-13⅝	—	—	—
One month	14 1/16-14	13⅞-14	14	15-14¾	14½	14⅛	13¾-13⅞	13 1/32	14 1/16-14⅛	14½
Two months	14 1/16-13 29/32	14 14 1/16	—	14⅝-14⅝	14½	—	13¾	13 11/16	14 1/16-14¼	14⅝
Three months	14⅛-14 1/16	14-14 1/16	14	14-13⅝	14½	14⅛	13⅝	13 5/8	14-14 1/16	14 5/16
Six months	13⅝-13½	13⅝-13¾	13⅝-13¾	13⅝-13	14¼	—	—	—	12⅞-12 15/16	13¾
Nine months	13 1/16-12 15/16	13-13⅛	—	13⅝-13	13⅝	—	—	—	—	—
One year	12 15/16-12 13/16	12 15/16-12 13/16	13-13⅛	12⅞-12⅝	13⅜	—	—	—	—	—
Two years	—	—	13-13⅛	—	—	—	—	—	—	—

Local authority and finance houses seven days' notice, others seven days fixed. *Long-term local authority mortgage rates nominally three years 12⅞-13⅛ per cent; four years 12⅞-13⅛ per cent; five years 12⅞-13⅛ per cent. ФBank bill rates in table are buying rates for prime paper. Buying rates for four-month bank bills 14½ per cent; four-month trade bills 14 per cent.

Approximate selling rate for one-month Treasury bills 13 15/32-13 11-64ths per cent; two-month 13 13-64ths-13 9/32 per cent; three-month 13 9/16-13 21-64ths per cent. Approximate rates for one-month bank bills 14 3/16-14¼ per cent; two-month 14 1/32-14⅛ per cent; and three-month 14 3/16 per cent; one-month trade bills 14¼ per cent; two-month 14⅝ per cent; and three-month 14 3/16 per cent.

Finance Houses Base Rates (published by the Finance Houses Association) 14½ per cent from September 1, 1979. Clearing Bank Deposit Rates for small sums at seven days' notice 11½-12 per cent. Clearing Bank Rates for lending 14 per cent. Treasury Bills: Average tender rates of discount 13.3485 per cent.

MONEY RATES

NEW YORK

Prime Rate	12.25-12.75
Fed Funds	11.25-11.375
Treasury Bills (13-week)	10.56
Treasury Bills (26-week)	10.44

GERMANY

Discount Rate	5
Overnight Rate	6.55
One month	7.75
Three months	7.825
Six months	7.875

FRANCE

Discount Rate	9.5
Overnight Rate	10.5
One month	11
Three months	11.6875
Six months	11.6875

JAPAN

Discount Rate	5.25
Call (Unconditional)	6.8125
Bills Discount (3-month)	7

INSURANCE

VAT poses problem on building repairs

INSURERS GENERALLY find no difficulty in handling claims with a VAT element, but there are some areas of dispute with the Customs and Excise. These are important to insurers providing material damage cover on property (and to non-insuring property owners). In the coming law term, the courts may resolve the areas of dispute.

Partial rebuilding

VAT rules at present provide that where a new building is erected, all services are zero-rated. However, where an existing building is repaired the work is subject to the standard 15 per cent tax.

There are relatively few claims for total destruction, whether by fire, impact or otherwise, requiring complete rebuilding. The majority of claims are for damage requiring repair, or partial rebuilding. Where there is substantial, but not total, damage it may be cheaper for insurers to pay first for demolition and then for complete, VAT-free reconstruction. The cost of this course has to be balanced against the potential VAT-bearing repair bill.

Since 1976, subsidence has been a frequent cause of property damage claims. Depending on such factors as the extent of the subsidence, the nature of the subsoil, the age of the property and the extent of the damage, insurers may arrange solely for repair, or go further and meet the cost of underpinning. There is no VAT argument on the cost of repair—clearly the tax is payable. But there has been argument whether or not underpinning should be zero-rated or bear VAT at the standard rate.

This underpinning issue was considered by Mr. Justice Drake in the Queen's Bench Division of the High Court last March in a test case between *ACT Construction Ltd* and *The Commissioners of Customs and Excise*. The case followed a decision of a VAT tribunal that VAT was payable. The tribunal took into account the provisions of Group 8 of Schedule 4 of the 1972 Finance Act, which specifies the various goods and services that are zero-rated and then lists exceptions.

The short point for the judge was whether or not underpinning—the provision of suitable foundations for existing premises—could be properly considered "work of repair or maintenance" and therefore an exception to the zero-rating provisions of the fourth schedule.

Usually underpinning involves the removal and replacement of some part of the existing foundation. But ACT's method for houses with shallow foundations is to construct an entirely new foundation underneath and separate from the existing one. Principally because of this, the trial judge said the character and nature of the premises had been altered by the work done, which was therefore within the zero-rating provisions of the fourth schedule. It could not be termed repair or maintenance.

The judge emphasised that this decision, like others in similar disputes, turned on the particular circumstances. The difference between zero-rated alteration and VAT-rated maintenance and repair should usually be a matter of degree. He suggested that the following points might be considered in deciding which side of the line a particular case fell:

Underpinning query

Would the work significantly alter the life of the building, significantly affect its saleability, significantly affect its market value, or make good a building previously considered defective in the light of modern building regulations?

The judge gave the Commissioners leave to appeal, and the dispute could come before the Court of Appeal later this year.

The judge's criteria could be in point in another dispute, *St. Luke's, Great Crosby v Commissioners for Customs and Excise*. A fire extensively damaged the church, but left part of the structure. Substantial variations and improvements were made during the course of repair, principally the installation of new heating and lighting systems and a new roof. The VAT tribunal has held that this was repair requiring payment of 15 per cent tax. An appeal has been lodged in the High Court from the tribunal's finding.

APPOINTMENTS

General Motors board changes

Three new directors have been elected to the Board of GENERAL MOTORS LIMITED, a subsidiary General Motors Corporation. They are Mr. William R. Hall, chief engineer, automotive components UK, Mr. Vincent T. Shervin director, personel and industrial relations, and Mr. William E. Werner, finance manager. Resigning from the Board are Mr. E. K. Kelly, regional manager, automotive components, Europe, on his retirement; Mr. W. J. McBride, director of engineering, automotive components, Europe transferred to the U.S.; Mr. D. G. Shelton, finance manager on transfer to General Motors de Venezuela; and Mr. D. T. Young, appointed director of personnel, Vauxhall Motors.

*

Mr. Brian Rowbotham has been appointed group managing director of MORGAN-GRAMPIAN. Mr. Albert Crampin, Mr. John de Carle, Mr. Maurice Foster, Mr. Jack Hutton and Mr. John Morris have become directors.

*

Mr. W. J. van Slobbe director, Estel NV, has been appointed a non-executive director of BAXTER FELL AND CO.

*

Mr. D. G. Spencer has been appointed a director of DELTA PLANT HIRE.

*

Mr. Richard Hollaway has joined the Boards of H. CLARKSON (OVERSEAS) and H. CLARKSON CONSTRUCTION INSURANCE BROKERS.

*

Mr. Karl Daniels has been appointed managing director of NOBLE LOWNDES PENSIONS and Mr. Stuart Irvine, managing director of NOBLE LOWNDES INTERNATIONAL, the companies responsible for UK and overseas development respectively within Noble Lowndes and Partners.

*

Mr. J. M. Horwell has been appointed managing director of HOWSON F. DEVITT AND SONS.

*

Mr. Ian R. Sutherland has been appointed managing director of FAIREY ALLDAY MARINE, a member of the Fairey Holdings group. He succeeds Vice Admiral Sir Allan Trewby who is a marine business development consultant to Fairey Holdings. Sir Allan agreed to take charge of Fairey Allday Marine until a chief executive could be appointed, following the acquisition of Allday Aluminium earlier this year. He remains as a non-executive director of the company. Mr. Sutherland was managing director and chief executive of the Falmouth group of British Shipbuilders.

*

Mr. A. J. Crisp, managing director of Brown Brothers Limited and subsidiaries, has been appointed to the Board of BROWN BOTHERS CORPORATION and Mr. B. R. W. Daughtrey has been made company secretary.

*

Mr. Gerrard Neale, Conservative MP for North Cornwall, has been appointed to the Board of TELEPHONE RENTALS.

*

Mr. John Prodger, director of of personnel and human resources, Carreras Rothmans, has been appointed chairman of the TOBACCO INDUSTRY EMPLOYERS' ASSOCIATION until the end of 1981. He succeeds Mr. G. L. Buckingham.

*

Mr. Roy B. Smith has been appointed a director of DENIS M. CLAYTON AND CO.

*

SMITH AND SONS (BLETCHINGTON) has formed two companies called Smiths Haulage (Bletchington) and Smiths Construction (Bletchington). Board members of the new concerts are Mr. John Smith, Mr. Godfrey Smith, Mr. Graham Bagshaw, Mr. Nigel Bailey and Mr. Terry Fisher. Mr. John Walker has been made a director of member company Smiths Limestone.

TEL AVIV

Company	Prices 1979 Sept. 9	Change week on the
Bank, Insurance and Finance		
Bank Leumi le Israel...	437	+ 5.0
IDB Bankholding	619	− 4.0
Bank Hapoalim Br. ...	535	− 5.0
Union Bank of Israel Br	430	+ 8.0
United Mizrahi Bank ...	314	+ 4.0
Hassneh Insurance Br. .	221	− 8.0
Gen. Mortgage Bank Br	342	+ 14.0
"Telahot" Israel Mrtge	343	+ 4.0
Land Development		
Af. Israel Inv. (I£103) .	1,100	− 30.0
Israel Land Develop. Br	197	− 2.0
Property and Building...	406	+ 2.0
Public Utility		
Israel Electric Corp. ...	289	+ 31.0
Investment Companies		
Bank Leumi Invest. ...	380	+ 14.0
"Clal" Israel Invest. ...	610	− 12.0
Discount Invest.	294	+ 4.0
Commercial and Industrial		
Alliance Tyre & Rubber	1,300	+ 80.0
Elco Br.	259	− 21.0
Argaman Textile Br. ...	522	− 39.0
"Ata" Textile "B"	162	+ 2.0
Amer. Israeli Ppr. Mills	808	− 22.0
Assis	595	+ 6.0
Elite	511	+ 11.0
Teva Req.	588	+ 13.0
Fuel and Oil		
Delek	237	− 1.0

Source: Bank Leumi le-Israel BM, Tel Aviv. b Bid.

WORLD STOCK MARKETS

Indices

NEW YORK—DOW JONES

	Sept. 7	Sept. 6	Sept. 5	Sept. 4	Aug. 31	Aug. 30	1979 High	1979 Low	Since Compil't'n High	Since Compil't'n Low
♦ Industr'ls	874.25	867.32	866.13	872.61	887.63	893.70	887.63 (31/8)	807.00 (27/2)	1051.70 (11/73)	41.22 (2/7/32)
H'me B'nds	84.16	84.55	84.78	84.78	85.14	85.22	86.70 (15/8)	82.82 (8/5)	—	—
Transport..	258.57	257.48	258.62	261.78	266.41	267.04	271.77 (15/8)	200.78 (27/2)	279.88 (7/2/69)	12.23 (8/7/32)
Utilities ...	108.42	107.54	107.04	107.58	108.76	109.00	109.81 (25/8)	98.51 (15/5)	163.32 (20/4/69)	10.58 (28/4/42)
Trading Vol 000's†	34,440	30,430	41,770	33,740	26,410	29,300	—	—	—	—

♦ Day's high 877.39 low 863.82

	Aug. 31	Aug. 17	Aug. 10	Year ago (approx)
Ind. div. yield %	5.58	5.57	5.64	5.36

STANDARD AND POORS

	Sept. 7	Sept. 6	Sept. 5	Sept. 4	Aug. 31	Aug. 30	1979 High	1979 Low	Since Compil't'n High	Since Compil't'n Low
‡Indust'ls...	118.83	118.80	118.25	119.38	121.57	121.14	121.57 (31/8)	107.08 (27/2)	134.64 (11/1/73)	3.52 (30/6/32)
‡Composite	107.66	105.85	106.40	107.44	109.32	109.02	109.32 (31/8)	96.13 (27/2)	125.85 (11/1/73)	4.40 (1/6/32)

	Sept. 5	Aug. 22	Aug. 15	Year ago (approx)
Ind. div. yield %	5.12	4.98	5.02	4.67
Ind. P/E Ratio	7.87	8.49	8.41	10.08
Long Gov. Bond Yield	9.12	8.98	8.89	8.37

N.Y.S.E. ALL COMMON

Sept. 7	Sept. 6	Sept. 5	Sept. 4	1979 High	1979 Low
61.39	60.94	60.66	61.35	62.40 (31/8)	53.88 (27/2)

Rises and Falls

	Sept. 7	Sept. 6	Sept. 5
Issues Traded...	1,865	1,879	1,904
Rises	812	907	209
Falls.........	605	572	1,424
Unchanged ...	448	400	271
New Highs.........	—	21	6
New Lows ...	—	7	19

	Sept. 7	Sept. 6	Sept. 5	Sept. 4	1979 High	1979 Low
MONTREAL Industrial	—	294.08	297.71	293.80	286.32 (31/8)	219.19 (2/1)
Combined	—	289.50	265.17	259.55	285.15 (31/8)	226.00 (2/1)
TORONTO Composite	1725.5	1694.4	1661.8	1669.4	1725.5 (7/9)	1315.6 (2/1)
JOHANNESBURG Gold	351.7	344.0	349.2	346.5	349.2 (5/9)	228.4 (17/4)
Industrial	353.8	352.6	349.6	347.2	353.8 (7/8)	276.5 (2/1)

	Sept. 7	Previous	1979 High	1979 Low
Australia (¶)	658.85	659.41	669.65 (7/8)	545.72 (2/1)
Belgium (‖)	105.78	104.09	190.00 (6/7)	98.80 (3/1)
Denmark (**)	94.47	94.81	97.46 (25/7)	89.52 (8/1)
France (††)	94.5	94.2	94.5 (5/9)	71.5 (15/3)
Germany (‡‡)	788.30	767.0	859.6 (16/1)	719.4 (7/6)
Holland (§§)	74.8	74.3	85.9 (24/1)	71.3 (7/6)
Hong Kong (¶¶)	598.47	599.73	625.78 (15/8)	495.83 (2/1)
Italy (‖‖)	87.28	86.76	89.48 (31/8)	68.38 (2/1)
Japan (a)	461.34	462.59	462.97 (31/1)	435.15 (13/7)
Singapore (b)	404.53	403.17	406.30 (17/8)	345.34 (25/2)
Spain (d)	92.65	92.77	111.96 (8/3)	91.42 (15/7)
Sweden (e)	342.85	341.25	401.54 (6/2)	338.72 (5/9)
Switzerld (f)	319.9	320.5	329.1 (2/5)	294.0 (5/1)

Indices and base dates (all base values 100 except NYSE All Common — 50; Standards and Poors—10; and Toronto 300—1,000; the last named based on 1975). † Excluding bonds. ‡ 400 Industrials. § 400 Industrials, 40 Utilities, 40 Finance and 20 Transport. ¶ Sydney All Ordinary. ‖ Belgian SE 31/12/63. ** Copenhagen SE 1/1/73. †† Paris Bourse 1961. ‡‡ Commerzbank Dec. 1953. §§ Amsterdam Industrial 1970. ¶¶ Hang Seng Bank 31/7/64. ‖‖ Banca Commerciale Italiana 1972. a Tokyo New SE 4/1/68. b Straits Times 1966. c Closed. d Madrid SE 29/12/78. e Stockholm Industrial 1/1/58. f Swiss Bank Corporation. u Unavailable.

FRIDAY'S ACTIVE STOCKS

	Stocks traded	Closing price	Change on day
Gulf Oil	1,341,000	31¼	+1¼
Reliance Group	1,118,600	51⅞	+2
Howard Johnson	830,300	18¾	+6¾
Cont. Illinois ...	773,900	29⅝	−⅛
Mobil	452,100	45⅞	+3⅛
IBM	381,000	67⅝	+⅛
Texaco	363,700	29⅝	+⅞
Norton Simon...	335,600	16⅝	−⅛
Gen. Tel. Elect.	335,400	28	−⅛
Bankamerica ..	303,500	28⅛	−⅛

EUROPE

WALL STREET

NEW YORK

CANADA

INTERNATIONAL CAPITAL MARKETS

INTERNATIONAL BONDS BY NICHOLAS COLCHESTER

A market comes under siege

ONCE AGAIN last week the international dollar bond market was ringed with unsettling developments. The U.S. prime rate jumped by up to ½ per cent on Friday to a maximum of 12¾ per cent. The American inflation rate for August was revealed as 1.2 per cent over the month. The dollar was weak with heavy intervention. Gold was extraordinarily strong reaching a high of $343 before dropping back to $331⅞ for a gain on the week of $15.

The secondary market in dollar bonds shed up to another point in dismal trading and there was no hint of a new straight issue. Bankers could only sympathise as UBS (Securities) staruggled to float a Canadian dollar bond issue for Bell Canada with a seven year maturity and a coupon of 10½ per cent. UBS boosted the coupon to 10¾ per cent and reduced the amount from C$75m to C$60m, but even so the bond was quoted on Friday at 97½.

Since the end of July, dollar bond prices have dropped an average of 1¾ per cent, leaving long term yields scattered around the 10½ per cent mark. But though the market remains intensely uncomfortable for its stall-holders it is not as though the future is completely bleak. There are investors to be found in the hard currency countries who believe that the straight dollar bond market now offers yield differentials which should be pinned down while they last.

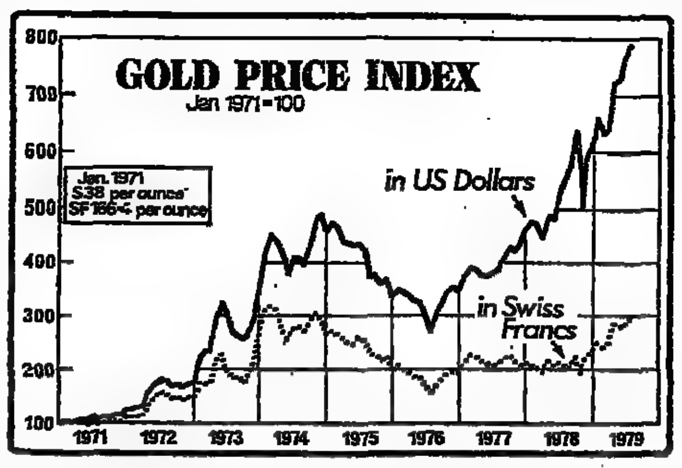
Interrenta, for instance, the DM 2bn bond fund managed by the Deutsche Bank offshoot DWS, is currently buying long dollar bonds, though its total exposure to the dollar is still small at just 8 per cent.

In Switzerland Mr. Oskar Burli, a senior vice-president on the investment side of Union Bank, says he is now encouraging investment managers to move out of dollar FRNs and into long-term fixed interest paper. But, in common with other Swiss investment managers, he says that some of his investment clients now need a lot of persuading.

In both countries, and particularly in Germany, these are minority voices. The preferred investment vehicle remains the D-Mark, where long term foreign bond yields compare with an inflation rate of 4.9 per cent, though investors also mention the yen and the gilder as minor alternatives.

There was little price movement in the D-Mark bond market last week but two new issues, DM 200m for New Zealand and DM 150m for the Japanese City of Kobe, were both being placed very easily, helped by the good names and nervousness about the dollar.

In fact the Bundesbank had two make another of its moves to limit the growth of the D-Mark as a reserve currency. It dissuaded Dresdner Bank from issuing any more of the non-marketable floating rate "deposit vouchers" which the big German bank had been offering in small quantities to central banks.



The Bundesbank remains determined that D-Mark instruments with floating rates remain "verboten" and that nothing resembling a negotiable D-Mark certificate of deposit should emerge. This is not the first time that the Bundesbank has had to disappoint foreign investors in this manner.

There is a widespread belief that Swiss franc bond yields are too low when set against those currently available in the D-Mark. The differential now stands at 3 per cent per annum and with the National Bank intervening last week to support the Swiss franc against the mark, Swiss investors are logically moving their money across the frontier.

The same factors make the Swiss market all the more attractive for issuers who can pluck up the courage to borrow Swiss francs. The table (right) shows a small surge of new issues and placements last week including ten year public bonds for Nippon Telephone at a yield of 4¼ per cent.

The Guilder is often mentioned as a conceptual alternatime to the D-Mark, but despite an announcement on Friday at the Dutch infflatio inflation that the Dutch inflation rate was down to 3.8 per cent in August, the Guilder bond market lost ground. Amro Bank announced that the Fl 75m private placement for Philips had been fully subscribed. But there were mixed reports as to the ease with which this had been achieved.

In the market for yen bonds, the tone has improved of late and Swiss and German investors are now wondering whether the yen is not set to rise a little. The available yield on Samurai bonds is now 8.4 per cent. No new issues are scheduled for September, but Brazil and Argentina are expected to tap the market in October.

Another Japanese convertible in the dollar sector was announced last week. Kleinwort Benson and Nomura are bringing Nippon Seiko, the bearing manufacturare, to the market for $30m for 15 years. The indicated coupon is 7¼ per cent. It seems that the Asahi Optical issue was rather touch-and-go with its coupon of 7 per cent paid annually, so Nippon Seiko accepted the advice of the issuing houses that a rather higher semi-annual coupon was justified.

CURRENT INTERNATIONAL BOND ISSUES

Borrowers	Amount m.	Maturity	Av. life years	Coupon %	Price	Lead manager	Offer yield %
U.S. DOLLARS							
††Imperial Oil of Canada	250	2009	21	*	*	Salomon Bros., Wood Gundy	*
††EIB	100	1987	8	*	*	Lehman Bros. Kuhn Loeb, First Bos., Mer. Lynch	*
††EIB	100	1999	15.05	*	*	Lehman Bros., Kuhn Loeb, First Bos., Mer. Lynch	*
††Prov. of Ontario	300	2009	30	*	*	Salomon Bros.	*
§Asahi Optical	30	1994	—	7	100	Yamaichi Int., CSFB	7.0
†Soc. Cen. de Banque	20	1987	8	6¼°	100	Soc. Générale. EBC	6.61°
‡**Sumitomo Heavy Ind.	30	1984	5	5¼°	100	Daiwa, S.G. Warburg	5.58°
§Nippon Seiko	30	1994	—	7¼	100	Kleinwort Benson, Nomura	7.38
D-MARKS							
New Zealand	200	1987	8	7¼	*	Commerzbank	*
City of Kobe	150	1989	10	7¼	100	Deutsche Bank	7.125
**Norcem	20	1986	7	7½	100	Deutsche Bank	7.5
SWISS FRANCS							
‡†Bank Handlowy	42.5	1989	n.a.	5°	100	B. Gutzwiller, Kurz, Bun.	5.06°
‡**§Nippon Sharyo Seizo	30	1984	—	4¾	100	Swiss Bank Corp.	4.81
World Bank	150	1989	n.a.	4¼	100½	Swiss Bank Corp.	4.215
Norges Hypoth.	45	1991	n.a.	4¼	*	Nordfinanz-Bank	*
‡**Oest. Kontrollbank	60	1985	n.a.	4¼	100	Swiss Bank Corp.	4.25
‡**§Wakachiku Con.	30	1985	—	4⅞	100	B. della Svizzera Ital.	4.875
Nippon Tel. & Tel. (g'teed Japan)	100	1989	n.a.	4¼	100	Swiss Bank Corp.	4.25
‡Prov. of Styria	15	1989	n.a.	4½	100	Wirtschafts-und-Prbk.	4.5
‡**§Nippon Min. Bearing	40	1984	—	4¾	100	Banca del Gottardo	4.75
FRENCH FRANCS							
‡Air France	120	1984	5	11	99¾	CCF	11.14
CANADIAN DOLLARS							
‡Bell Canada	60	1986	7	10¾	100	UBS (Securities)	10.75
GUILDERS							
‡**Philips	75	1984	5	8¼	100	AmRo	8.25
UNITS OF ACCOUNT							
‡Copenhagen Cnty Auth.	20	1991	¶	8¾	100	Kredietbank Luxem.	8.75
KUWAITI DINARS							
‡CCCE (g'teed France)	10	1994	9.4	8	100	KIIC. Crédit Lyonnais	8.0
TVO Power (g'teed Fin.)	7	1989	7.3	7¾	*	KFTCIC	*

* Not yet priced. ‡ Final terms. ** Placement. † Floating rate note. ° Minimum. § Convertible. †† Registered with U.S. Securities and Exchange Commission. ¶ Purchase fund.
Note: Yields are calculated on AIBD basis.

DOLLAR BONDS BY JOHN EVANS

Surviving this year's bear market

THE ABILITY of much of the established structure of the Eurodollar bond market to weather the current bear market, the worst since 1974, is becoming a question of real concern.

Last week, mounting rumours of stiff losses, albeit on a book basis, on the new issue and book basis, on the new issue and secondary market sides were circulating widely. In fact, the primary side of the market looks to be in the worst shape of the two, according to the comments of any market participants.

The problem is relatively simple. Over the first eight months of this year, new issue volume for the straight sector of the dollar bond market alone totalled $4.4bn.

Estimates suggest that up to $400m worth of these issues could still be unsold, a large figure for a market which has traditionally been considered to be under-capitalised.

The introduction of new underwriting techniques during the course of the year is probabily compounding the problem. As Kidder Peabody observes, "For those issuing institutions which contracted to take large blocks of wholly underwritten issues in the full knowledge that they could only place a small portion, the chickens have come home to roost."

First Chicago Limited, commenting on the situation, agrees with this view. Investors were not prepared this summer to accept further fixed-interest paper on their books, so that the bulk of these issues must rest with those managing underwriters, it says.

"Today, two to three months later, the cost of carrying such an inventory is too much to bear and the bonds are now available in the secondary market at deep discounts.

Will this bear market weed out the weaker underwriters? Eurobond officials at Citicorp International Group believe that the present shakeout could see the withdrawal, even on a temporary basis, of smaller market participants.

Funding costs, already ranging up to a negative "carry" of 200 basas points, are likely to become even greater. Consequently, more inventory unloading by the weaker elements looks likly, and some of them may be unable to await the market's eventual turning point, it is suggested.

Chemical Bank International officials also find little relief in the market's immediate outlook. Current conditions must be especially "painful" for those houses which took big underwriting positions in new issupes in recent months.

But Chemical, one of a number of U.S. banks which became active as full-scale bond particiants this year, remains committed to the market. Business has proved disappointing, although Chemical has kept its own position within bounds, they say.

Meanwhile, the big European houses, predominantly the Swiss and German banks, remain virtually out of the dollar side of the market, and seem content with this low profile.

Such banks are known to have been displeased with recent new market innovations for placing bonds. Such techniques as the European Investment Bank's $100m tender offering have represented an attempt to erode the traditional commission structure which the participating banks share among themselves.

At least one view heard in continental Europe is that most of the Swiss and German banks, acknowledged to have the biggest placing power in Eurobonds, remain determined to retain as much of the traditional market structure as possible.

The current bear market may conceivably create enough casualties in the market's ranks to ensure that the big continental houses remain a dominant market force, ultimately dictating market practices, it is suggested.

U.S. BONDS BY STEWART FLEMING

New benchmarks set

THE COST of borrowing in the U.S. continued its relentless rise last week in response to heavy credit demands, the conviction that the Federal Reserve is determined to contain excessive credit grotwh and anxiety about the renewed pressure on the dolar in nervous foreign exchange markets.

New benchmarks were set for short-term interest rates in a number of sectors of the market. For the first time interest rtaes on U.S. Treasury bills for all maturities out to one year passed into double figures as over half a percentage point was added to Treasury bill yields. The one and three month bills are now yielding 10.60 and 10.51 per cent respectively.

The prime rate was raised a full half a percentage point to a record 12¾ per cent. The increase in part reflects continuing surges in demands for credit—business loans rose a record $1.14 in the first week of September. The strength of loan demand is permitting the banks to pass their own sharply increased costs of securing deposits on to their customers. Leading banks are having to pay around 11¾ per cent for money raised by issuing three and six month certificates of deposit.

The cost of carrying interest-free reserves with the Federal Reserve has to be added to these rates to establish the actual cost to the banks of attracting such deposits. With demand heavy and funds this expensive there are already forecasts that another prime rtae increase to 13 per cent is not far away and could even come this week.

In the wake of comments made by Mr. Paul Volcker, the Fed chairman to a Congressional committee in mid-week and renewed growth in the money supply which is accelerating outside the Fed's targets, there are no expectations of any easing in monetary policy.

On the contrary, most analysts have concluded that the Fed has tightened policy again, increasing its target interest rate on Fed funds, interbank loans, to 11¼ per cent.

In his public statements, moreover, Mr. Volcker is emphasising the need to curb monetary growth and reserve creation, not the absolute level of interest rates.

The latest inflation figures, producer prices for August which increased at an annual rate of 14.4 per cent, are another indicator pointing towards further moves by the Central Bank to resist monetary growth and allow interest rates to rise.

FT INTERNATIONAL BOND SERVICE

U.S. DOLLAR STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Alcoa of Australia 10 89	50	96⅞	96⅝	+0⅛	−0¼	10.60
Alex Howden XW 9½ 91	30	80	82	0	+1	12.66
Australian Res. 9⅞ 84	30	96	96½	−0⅛	−0½	10.63
Avco O/S Cap. 10⅝ 87	40	91⅞	91⅞	−0⅛	−1	11.96
Beneficial Fin. 9⅞ 87	100	95¾	96¼	+0⅛	−0⅛	10.51
CECA 10⅞ 91	150	95⅞	96⅛	−0⅛	−0½	11.47
CECA 9⅞ 99	125	†91⅛	91⅞	−0⅛	−0¼	11.09
Canadian Pacific 9⅞ 89	50	96	96½	−0⅛	−0½	10.36
Carter Hawley 9⅞ 86	50	94	94½	−0⅛	−0½	10.96
Comalco Inv. E. 10⅛ 91	40	96⅞	97⅜	−0⅛	−0⅝	10.68
Continental Grp. 9⅞ 86	100	96¼	96¾	0	−0⅛	10.35
Dome Petroleum 10 94	60	93½	94	0	0	10.86
Dominion Bridge 10⅜ 84	30	97⅛	97⅝	−0⅛	−1	10.96
Dow Chem. O/S 9⅞ 94	200	96	96½	−0⅛	−0⅛	10.11
EIB 9⅞ 86	150	97⅛	97⅞	0	−0⅛	10.39
EIB 9⅞ 99	100	†96½	97¼	−0⅛	−1⅛	10.51
EIB 9⅞ 87	150	98⅛	98⅝	−0⅛	−0⅛	10.41
EIB 10 99	150	98⅛	98⅝	−0⅛	−0⅛	10.43
Export Dv. Cpn. 9⅞ 84	100	96⅞	96⅞	+0⅛	−0⅛	10.23
Export Dv. Cpn. 9⅞ 84	150	97⅞	98⅛	−0⅛	−0⅛	9.77
Finland 9½ 86	100	96⅞	97⅛	+0⅛	+0⅛	10.13
Finland 9⅞ 89	100	97	97½	+0⅛	0	10.32
GTE Finance 9½ 84	50	96⅞	96⅞	0	−0⅛	10.63
GTE Finance 9⅞ 89	55	93	93½	0	−0⅛	10.89
General Motors 9⅞ 86	150	95⅛	95⅝	0	−0⅛	10.21
Gould Int. Fin. 9⅞ 85	50	96½	97	0	−0⅛	10.53
Hoechst Fin. XW 6½ 89	125	†76⅞	77½	−1⅛	−1½	10.60
Hudson Bay Co. 10 94	50	96¼	96⅝	−0⅛	−0⅞	10.46
ITT Antilles 9½ 89	75	92⅞	93¼	−0⅛	−0⅞	10.68
Kennecott Int. 9½ 86	100	91⅞	92⅛	−0⅛	−0⅛	11.27
Manitoba 9½ 89	75	94⅞	95⅛	0	−0⅛	10.35
Nat. Des Telecm. 9½ 86	100	96	96½	−0¼	−0⅛	10.28
New Brunswick 9⅞ 94	75	93½	94	+0⅛	−0⅛	10.60
Newfoundland 10 94	50	96⅞	97⅛	−0⅛	−0⅛	10.41
Norway 9⅞ 84	150	97⅞	98½	−0⅛	−1⅛	10.55
Norway 9½ 84	150	96⅞	97⅛	−0⅛	−0⅛	10.28
Nova Scotia Pwr. 9⅞ 89	50	95⅞	95⅞	0	−0⅛	10.49
Occidental Fin. 10⅛ 84	50	96⅞	97⅛	−0⅛	−1⅛	11.10
Orient Leasing 9½ 86	25	†93⅞	94⅛	−0¼	−0½	10.77
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

YEN STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.17
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	8.04
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.96
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.58
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	8.33

OTHER STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DEUTSCHE MARK STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

SWISS FRANC STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

FLOATING RATE NOTES	Spread	Bid	Offer	C.dte	C.cpn	C.yld
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CONVERTIBLE BONDS	Cnv. date	Cnv. price	Bid	Offer	Chg. day	Prem
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

BONDTRADE INDEX AND YIELD	Medium term		Long term	
Sept. 7 ...	84.07	9.16	87.00	9.09
Aug. 31 ...	84.07	9.16	87.05	9.09
High '79...	85.75	(1/2)	89.99	(30/1)
Low '79 ...	84.07	(31/8)	87.00	(7/9)

EUROBOND TURNOVER (nominal value in $m)	Cedel	Euroclear
U.S. $ bonds		
Last week ...	893.5	1,948.4
Previous week ...	327.6	1,466.3
Other bonds		
Last week ...	153.7	282.9
Previous week ...	193.2	307.9

* No information available—previous day's price.

† Only one market maker supplied a price.

STRAIGHT BONDS: The yield is the yield to redemption of the mid-price; the amount issued is in millions of currency units except for Yen bonds where it is in billions. Change on week=Change over price a week earlier.

FLOATING RATE NOTES: Denominated in dollars unless otherwise indicated. Coupon shown is minimum. C.dte=Date next coupon becomes effective. Spread=Margin above six-month offered rate (‡ three-month) for U.S. dollars. C.cpn=The current coupon. C.yld=The current yield.

CONVERTIBLE BONDS: Denominated in dollars unless otherwise indicated. Chg. day=Change on day. Cnv. date=First date for conversion into shares. Cnv. price=Nominal amount of bond per share expressed in currency of share at conversion rate fixed at issue. Prem=Percentage premium of the current effective price of acquiring shares via the bond over the most recent price of the shares.

The list shows the 200 latest international bonds for which an adequate secondary market exists. The prices over the past week were supplied by: Arab Company for Trading Securities SAK; Kredietbank NV; Credit Commercial de France; Credit Lyonnais; E. F. Hutton Services SARL; Commerzbank AG; Deutsche Bank AG; Westdeutsche Landesbank Girozentrale; Banque Internationale Luxembourg; Kredietbank Luxembourg; Algemene Bank Nederland NV; Pierson, Heldring and Pierson; Credit Suisse/Swiss Credit Bank; Union Bank of Switzerland; Akroyd and Smithers; Bankers Trust International; Bondtrade; Banque Francaise de Credit International; Citicorp International Bank; Daiwa Europe NV; Deltec Trading Company; Dillon, Read Overseas Corporation; EBC; First Chicago; Goldman Sachs International Corporation; Hambros Bank; IBJ International; Kidder Peabody International; Merrill Lynch; Morgan Stanley International; Nesbitt Thomson; Samuel Montagu and Co.; Scandinavian Bank; Strauss Turnbull and Co., Sumitomo Finance International; S. G. Warburg and Co.; Wood Gundy.

Closing prices on September 7

New Equipment

New Equipment, the tubular steel furniture group, was hit *by the public spending cuts, the* transport strike and the loss of business in Iran in the first half to April 30, 1979.

Pre-tax profits tumbled from £86,835 to £36,119 on turnover down from £884,242 to £858,510.

Stated earnings per 10p share declined from 1.96445p to 0.8177p, and the net interim dividend is 0.35p (0.335p). Last year the group paid a total of 0.995p after taxable profits had risen slightly to £120,000.

Tax at halfway takes £19,765, aaginst £47,546.

Northern Engineering

Taxable profits of Northern Engineering Industries fell from £15.57m to £11.67m in the first *half of* this year on *turnover* marginally ahead at £199.36m, against £198.6m. The directors say *the results were seriously* affected by the difficulties at NEI Reyrolle, where the *workforce has been cut to match* trading conditions.

But the Board adds that after the action taken at Reyrolle the second half should show some improvement, although group results for the *full year will be* below last year's £30.46m.

Most of the trading companies *have a good forward order book,* and order intake for the six months is ahead of the level for the first half of 1978.

The REI Reyrolle plant at Hebburn was affected by industrial action in the latter part of 1978 and the settlement of the dispute significantly increased overheads, say the directors.

These internal problems coincided with the worldwide shortage of demand for switchgear and the market in this sector shows no immediate signs of improving, they add.

At midway the trading surplus was down from £16.26m to £12.25m. Interest charges were reduced from £695,000 to £585,000.

The interim dividend is being held at 1.25p net, after an adjustment for a scrip issue. The total payment last year was an adjusted 3.75p. Stated earnings per 25p share are down from 6.89p to 4.92p.

Tax takes £3.5m (£4.67m) and minorities £533,000 (£331,000).

The Board says the trend in the principal overseas manufacturing continues to be *favourable, contributing* to profit and to the demand for components supplied from the UK factories and for complementary equipment of more sophisticated design and specification of UK origin.

P & O

REFLECTING its recovery from a difficult start to the year, pre-tax profits of the Peninsular and Oriental Steam Navigation Company rose from £618,000 to £13,777,000 for the six months ended June 30, 1979.

The directors warn that some divisions will be adversely *affected in the second half by* the strength of sterling and from increasing competition in the *liner trades, but the results for* the full year, while still inadequate are expected to show a *marked improvement over 1978.*

In the last full year, taxable profits dropped to £18.2m *(£42.5m).*

At the annual meeting in June, Lord Inchcape, the chairman, *said that while the directors expected* 1979 to be another poor year, the group was recovering *from a bad start. The economies* flowing from the reorganisation carried out towards the end of *1978 were beginning to make* themselves felt and while the main benefit would come in *1980 and later years,* the 1979 results would be better than they would have otherwise expected.

Gross revenue from outside the group advanced in the half year from £524.97m to £567.13m. *Associates' contributions* were well up from £1.03m to £8.63m. Interest takes £21m (£16.98m).

Profits before interest and tax for the half year increased from £17.6m to £34.8m. The result was split betwen activities as to:—bulk shipping £3.4m (£6.1m loss), general cargo £8.9m (£9.3m), passenger £4m (£2.8m), European transport and agency services £0.6m (£2.6m), energy £6.4m (£1.8m loss), Bovis £4.1m (£4.3m), property £2.4m (£2.2m), UK banking £1m (£0.4m), Australia £3.8m (£3.2m), and other overseas £0.2m (£0.7m).

The directors say the half year has been difficult with a road transport strike in the UK, disruptions in Iran and substantial increases in the cost of all types of fuel. The oil trading activities of the energy division have, however, benefited substantially *from the disturbances in the oil* industry and the bulk shipping division has performed well in improved market conditions.

ET and AS has not yet recouped its losses from the road transport strike which had a particularly severe impact on its international operations. Other divisions, taken together, increased their profits. The first *benefits of the recent reorganisation* contributed to the better performance.

After tax, there was a turnround from a £4m loss to a profit of £7.41m. Earnings per £1 deferred stock were 4.8p (2.7p loss) while the net interim dividend is maintained at 3p, costing £4.24m (same)—last year's total was 6.54228p.

Extraordinary credits of £1.32m (£161,000) consist mainly of £0.6m net profit on sale of properties and £0.8m on the sale of subsidiaries and trade investments.

Total group borrowings—£413m at June 30, 1979, compared with £425m at end of 1978—should continue to fall, the directors state.

	Six months 1979 £000	1978 £000	Year 1978 £000
Gross rev.*	567,128	524,957	1,168,896
Depreciation	24,808	21,446	41,813
Sales of ships profit	1,947	639	[illegible]
Operating result	26,154	16,571	44,405
Share assoca. profit†	8,627	1,029	9,315
Profit	34,781	17,600	53,720
Net interest payable	21,004	16,982	35,840
Profit before tax	13,777	618‡	18,180
UK tax	1,621	2,680	4,359
Overseas	3,475	1,700	3,772
Associates	1,372	826	2,128
Net profit	7,479	‡3,998	8,471
Minority profit	579	‡255	1,308
Exchange deficit	807	1,386	6,270
Extraord. credits	1,322	161	§7,443
Attrib. profit	7,545	‡4,988	‡6,[illegible]
Pref. div.	59	58	117
Interim div.	4,239	4,239	4,239
Final	—	—	[illegible]
To reserves	3,247	[illegible]	[illegible]

* From outside group. † Less losses. ‡ Loss. § Debits. ¶ From reserves.

The group has changed its accounting policy on ship sales, and all ship sales profits realised during the six months have been credited to the operating result —the effect has been to decrease operating profit by £0.8m. Comparatives are adjusted and the ship sales profits carried forward at the beginning of the year have been transferred direct to reserves.

Profit retentions and the crediting to reserves of the balance of ship sales profits increased group capital and *reserves by £11m to £415m at* June 30, 1979.

BUSINESSMAN'S DIARY

UK TRADE FAIRS AND EXHIBITIONS

Date	Title	Venue
Sept. 11—22	Chelsea Antiques Fair (0727 56069)	Chelsea Old Town Hall
Sept. 11—13	Electronics Show (08833 4371)	Bristol Exhibition Centre
Sept. 16—19	MAB '79—International Meanswear Fair (01-839 5041)	Earls Court
Sept. 17—20	Filtech/Dustex '79—2nd World Filtration Exhibition (01-236 0911)	Olympia
Sept. 18—21	Firetech '79 International Fire Protection and Control Exhibition (01-637 2400)	Brighton Exbn. Centre
Sept. 19—20	International Exhibition of Styling Accessories (01-734 7471)	Russell Hotel, W1
Sept. 24—26	Weightech '79 (01-686 5741)	Metropole Ex. Centre Brighton
Sept. 24—28	International Welding and Metal Fabrication Exhb. (021-705 6707)	National Exhibition Centre, Birmingham
Sept. 25—28	International Conference and Exhibition on Information Processing—Euro IFIP (01-405 6233)	Wembley Conference Centre
Sept. 25—28	Business Efficiency and Equipment Exhibition (0272 31850)	Exhibition Centre, Bristol
Sept. 26—30	High Fidelity Autumn Exhibition (Radnage 2674)	Cunard Int. Hotel, London
Sept. 27—28	Interior Designers and Decorators Association Exhibition—DECOREX (01-242 6171)	Grosvenor House, London
Sept. 30—Oct. 3 .	Frozen Foods and Freezer Festival (01-353 4885)	West Centre Hotel, London
Sept. 30—Oct. 3 .	British International Footwear Fair (01-739 2071)	Olympia
Sept. 30—Oct. 3 .	International Sports and Leisure Exhibition—ISLE (01-734 9694)	National Exhibition Centre, Birmingham
Oct. 3—4	Electrical Research Association Battery Exhibition (Leatherhead 264045)	Royal Garden Hotel, W
Oct. 3—4	London Bakers Exhibition (01-947 7731)	New Horticultural Hall
Oct. 6—9	Salon International (Hairdressing and Beauty) (01-261 8000)	Wembley Conf. Centre
Oct. 7—10	International Garden and Leisure Exhibition—GLEE (01-546 6757)	National Exhibition Centre, Birmingham
Oct. 8—11	Distribution for Industry Exhibition (01-353 4885)	Nat. Exbn. Centre, Birm'ham
Oct. 9—11	Electronic Measuring Instruments Exhibition—EMIX (021-705 6707)	Bloomsbury Centre Hotel
Oct. 9—11	Medical Laboratory Exhibition (01-776 0011)	West Centre Hotel

OVERSEAS TRADE FAIRS AND EXHIBITIONS

Current	International Autumn Fair (01-684 6938) (until Sept. 16)	Vienna
Current	International Fair (until Sept. 23)	Ghent
Sept. 12—20	International Engineering Fair (01-278 0281)	Brno
Sept. 13—16	International DIY Trade Fair (01-236 0911)	Essen
Sept. 14—23	International Autumn Fair (01-486 1951)	Zagreb
Sept. 16—19	LIGAM—Furniture Trade Fair	Berne
Sept. 16—19	Clothing Fair	Brussels
Sept. 17—21	Fall Gift Show (01-540 1101)	Toronto
Sept. 18—21	Int. Security, Safety and Protection of Mankind and Property Exbn. (01-486 1951)	Paris
Sept. 19—21	International Office Equipment Exbn.—SICOB (01-439 3964)	Paris
Sept. 21—25	International Packaging Show (01-734 9638)	Tokyo
Sept. 22—25	Int. Trade Fair of Sports Goods, Camping Equipmt. and Garden Furniture—SPOGA (01-409 0956)	Cologne
Sept. 22—26	Industrial Equipment and Material Exhibition—INDEQUEX	Hong Kong
Sept. 23—26	Hardware Trade Fair (01-439 3964)	Paris
Sept. 25—27	National Business Aircraft Association Convention and Exhibition	Atlanta
Sept. 26—30	Research and Development Exhibition—INNOTEX '79 (01-236 0911)	Stuttgart
Sept. 27—30	International Suppliers Fair for the Motor Industry —AUTOTERNIK	Paris
Sept. 28—Oct. 5 ..	International Exhibition of Motor Maintenance and Car Accessories (01-439 3964)	Copenhagen
Sept. 28—Oct. 7 .	International Motor Cycle and Cycle Show	Paris
Sept. 29—Oct. 8 .	International Autumn Trade Fair	Metz
Sept. 30—Oct. 3 .	Irish Fashion Industry Fair (Dublin 763385)	Dublin
Sept. 30—Oct. 4 .	Industrial Subcontractors Exhibition (01-540 1101)	Copenhagen
Sept. 30—Oct. 5 .	International Fair for Machine Tools and Tools (01-540 1101)	Copenhagen
Oct. 1—5	Chemical Plant Engineering Exhibition (01-486 1951)	Tokyo
Oct. 2—11	International Textile Machinery Exhibition (01-651 2191)	Hanover
Oct. 3—5	Hong Kong Toy and Gift Fair (01-930 7955)	Hong Kong
Oct. 5—10	Electronics Show (01-734 9638)	Osaka

BUSINESS AND MANAGEMENT CONFERENCES

Sept. 10—12	EMS: The Japanese Approach to Product Quality Management (High Wycombe 33171)	Institute of Directors, Pall Mall
Sept. 11—12	Freight Information Services: Practical Marketing for Road Hauliers (Southport 38515)	Southport
Sept. 11—12	ASUAG: International Chronometry Congress (01-387 0116)	Geneva
Sept. 12—13	Financial Times: Korea in the 1980s (01-236 4382)	Seoul
Sept. 12—15	International Newspaper Promotion Association: 9th European conference	Munich
Sept. 13—14	Society of Chemical Industry: Marine Corrosion on Offshore Structures	University of Aberdeen
Sept. 14	CILA: Educational Conference (01-240 1496)	Frankfurt
Sept. 14	MSS Computer and Business Consultancy: Effective Budgeting and Financial Planning (Worthing 347551)	Royal Lancaster Hotel, W2
Sept. 16—21	Brunel Management: Experimental Methods in Management Training (Uxbridge 56461)	Brunel University
Sept. 16—21	ICMA: Decision Making Techniques for the Management Accountant (01-637 2311)	Loughborough
Sept. 17—18	Management Centre Europe: Top Management Forum	Monte Carlo
Sept. 17	CCC: Tax Planning and the Boat Owner—How to Reduce Costs (01-232 6362)	Cotswold Hotel, Southampton
Sept. 25	Planned Savings: Personal Finance for the Expatriate (01-251 3546)	Inn on the Park, W1
Sept. 26—29	Institute of Purchasing and Supply: National Conference—Enterprise, the Corporate Role of Purchasing and Supply Management (Ascot 23711)	Sheffield

Phoenix Assurance

POOR RESULTS in the U.S., Australia and Europe over the first half of the year sent the underwriting losses of Phoenix Assurance soaring from an adjusted £3.2m to £8m. And *despite a 21 per cent rise in* investment income from £18m to £21.8m, pre-tax profits were *cut by 7 per cent from* £15.1m to £14m. Net profit over the first half was slightly lower at £8.2m compared with £8.4m. Net premiums written advanced by 14 per cent from £160.1m to £182.5m.

The results in the U.S. suffered following the tornado, which caused devastation at Wichita, Texas. An underwriting loss of £1.1m was recorded against *a profit of* £700,000 and the operating ratio deteriorated from 96.1 per cent to *101.9* per cent.

Business in the UK recovered strongly in the second quarter *following the effects of the* severe weather on the first quarter results. The underwriting *loss* over the first *half* was reduced to £3.4m, the same as in 1978. This is in contrast to other composite *insurance* companies, where the UK underwriting loss is much heavier than in *1978. Fire and* accident business has shown the expected improvement with profits in all the *major classes.* But there is still a loss being recorded in the household account.

Business in Europe remains disappointing and the generally profitable outcome from other overseas territories, especially Canada, was overshadowed by a poor result from Australia.

On long-term business, single premiums over the first half of the year improved by one-third from £10.1m to £13.4m. But new annual premiums declined slightly from £7.7m to £7.6m.

An interim dividend of 5.8p per share has been declared—in 1978 it was 5.112p.

Portals

After recovering from a slow start Portals Holdings raised taxable profits by 10 per cent to £4.51m in the first half of 1979 on turnover ahead from £37.7m to £44.1m.

The directors say that progress was made on all fronts. But they add it remains difficult *to win business around the world.*

The trading profit of the papermaking division was lifted from £2.24m to £2.48m and that of the water treatment and engineering side from £1.73m to £2.01m. Property *operations turned in* a surplus of £339,000 (£344,000).

The interim dividend is being raised 10 per cent from 3.85p to 4.25p net. Last year the group paid a total of 8.6964p after increasing the taxable surplus from £8.68m to £9.57m. After adjusting for loan stock conversion last year basic earnings per 25p share are up from 10.76p to 12.08p and fully diluted from 10.62p to 11.92p.

Tax for the period takes £2.34m (£2.16m), and the attributable surplus is up from £1.9m to £2.14m.

The directors say markets for paper products improved as the year has progressed. Order book *for the rest of the year* is healthy and there was a rewarding increase in demand for security *paper for documents other than* bank notes, such as travellers' cheques.

The large investment programme at Overton Mill is progressing according to plan with only minor delays which are not affecting total results.

Exports, direct and indirect, of the papermaking division represent about 50 per cent of total sales, and the current strength of sterling has not damaged competitiveness. The division has benefited from the improved exchange rates on the import of raw materials.

After two excellent years the water treatment and engineering division is still making good progress, though less pronounced. The first half results are broadly in line with expectations and it looks as if the second half will also be satisfactory so long as upheavals at home and, particularly, abroad, can be avoided, says the Board.

In this division the strong pound has hit profits because margins on sales to the U.S. have been eroded and profits from overseas subsidiaries appear lower when expressed in sterling.

The figures for the property division are influenced by the incidence of sales by the property development company which made a profitable sale in the first *half of 1978* with no similar transaction in the last six months. The directors expect that it will *complete* a development in the second half. Rental income has increased in the first half and will *continue at a similar rate* for the second six months.

It is anticipated that holders of *the remaining £510,000 of 8 per* cent convertible unsecured loan stock will convert their holdings *into ordinary shares* in September 1979 as the ordinary dividend rate makes conversion attractive.

	6 months 1979 £000	1978 £000
Turnover	44,725	37,665
Papermaking	13,025	11,716
Water treatment and Eng.	32,740	27,562
Property	511	538
Less intergroup sales and rents	2,151	2,151
Trading profit	4,828	4,314
Papermaking	2,478	2,242
Water treatment and Eng.	2,011	1,728
Property	339	344
Unallocated costs (net) incl. int. on conv. unsec. loan stock	319	202
Profit before tax	4,509	4,111
Profit after tax	2,164	1,956
Minorities	8	33
Pref. div.	16	16
Attributable	2,140	1,908

Raybeck

INCLUDING recently-acquired Bourne and Hollingsworth, turnover of Raybeck, ladies' and menswear *retailing* group jumped nearly £10m from £75.9m to £95.8m, and taxable profits came through at a record £7.76m for the year ended April 28, 1979, against £6.41m.

At *halfway,* profits had risen to £3.48m (£2.76m) and the directors were confident that after *providing for interest, in* connection with the Bourne acquisition in the second six months, record profits would be achieved for the full year.

Mr. Ben Raven, chairman, says the retailing companies, while making a significant contribution to profits experienced a downturn in the last quarter of 1978-79 which has continued into the first *quarter of the current year.*

Nevertheless, it is confidently expected that results for the full year *should be satisfactory.*

The chairman states that following considerably increased strength in the *group's balance-sheet* and liquidity, resulting from the Bourne acquisition, there is "enhanced confidence in the future of the company."

Net asset value per share amounted to 49p in 1978, and it is currently 97p, Mr. Raven points out.

	1978-79 £000	1977-78 £000
Sales	95,787	75,946
Profit before tax	7,795	6,411
Tax	3,355	2,920
Net profit	4,400	3,491
Extraord. credit	1,168	—
Minority interests	35	—
Making	5,533	3,491
Pref. dividend	196	—
Ordinary dividend	1,457	1,222

Earnings are shown as 11.43p (9.61p) per 10p share and the dividend is stepped up to 4p (3.36p) net *with a final of 2.87p.*

The directors say they intend to recommend, whenever *possible, a rate of dividend* which reflects the growth of the company.

Shakespeare

Better trading at Joseph Shakespeare and Co. reduced first half loss to £15,000 before tax, compared with £167,000 for the previous six months. Mid-year last time there was a profit of £83,000.

Currently plans for a sustained and significant improvement in profitability have been hit by the industrial action in the engineering industry and forecasting is difficult, says Mr. Jack Shakespeare, the chairman.

Half-year sales by the manufacturer of forgings and parts for tractor, automobile and other industries, were maintained at £3.9m.

After a £8,000 tax credit (£43,000 charge), the loss per 5p is stated at 0.9p (earnings 0.5p). The net interim dividend is raised to 0.747p (0.715p)—the final for 1978-79 was 1.2089p.

Mr. Shakespeare says that although the general recession in the forging industry, which *affected the second half* last year, still persists, the operating losses at Vaughan Brothers and *Shropshire Forgings have been* steadily declining.

Sharna Ware

FIRST HALF 1979 taxable profit was near £23,000 higher for Sharna Ware. Announcing a *25 per cent increase in net* interim dividend the company says the outlook is very *encouraging. Last year the* plastic ware manufacturer turned in a record £0.92m.

Half-time sales were up from £4.93m to £5.23m, and the net balance emerged at £53,449 (£52,453) after tax at £68,735, against £56,823.

The net dividend is raised to 1.26p (1.005p)—the final for 1978 was 1.6583p.

Sun Alliance

The abnormally severe weather conditions experienced last winter in the UK, Europe and North *America had a severe impact on* the first half-year trading results of Sun Alliance and London Insurance. These *conditions,* which cost the group some £11m of exceptional losses, virtually doubled the underwriting loss over the six months to June 30, 1979, from £10.5m to £20.1m.

Despite a 13.2 per cent rise in investment income from £29.6m to £33.5m, pre-tax profits were cut by one-quarter from £21m to £15.7m and attributable profits were trimmed by 22 per cent from £11.8m to £9.2m.

Premium income over the period rose by 3.7 per cent from £268.2m to £278.1m. This growth was held back by the strength of sterling and, excluding the effect of changes in exchange rates, the underlying increase in premium income was 9.6 per cent.

Business in the UK and Ireland was the most severely hit with an underwriting loss of £12.5m (£7.7m). The group is the largest domestic insurer in the UK and most of the exceptional losses in the UK, of some £8m, came from a mass of small claims on the household account as a result of the severe winter weather.

Motor and accident results also deteriorated and the home fire account suffered from an unusually high number of large claims.

Generally poor results in Europe, where the loss increased from £2.5m to £4m, and riots in Liberia, largely accounted for the remainder of the heavy underwriting loss.

The strength in sterling also held back the growth in investment income, the underlying increase, after allowing for exchange rates being 18.2 per cent.

A steady growth in new life and annuity business is reported, with new annual premiums increasing by 32 per cent from £9.4m to £11.5m and single premiums advancing by 26 per cent from £5m to £6.3m.

This growth was spread over all main classes of business.

The interim dividend is stepped up from 11p to 13.5p net—the previous final was 11.505p.

Turner and Newall

Taxable profits of Turner and Newall, the automotive *components, chemical and construction* material group, fell by £2.5m in the first half of 1979. Trading profits declined in the UK but those of the overseas operations increased.

The midway pre-tax surplus fell from £21.3m to £18.8m on turnover ahead from £270m to £294.7m. But the directors say the second half should be better than the first.

The interim dividend is being held at 4.5p net and the Board intends a same-again total for the full year of 11.5p. Last year taxable profits were £39.6m.

Reporting on the year-end results the directors warned of the effects of the road haulage dispute and of inflationary wage *settlements.* They added that the overseas picture was more encouraging.

The directors now say that high UK interest rates and the strength of sterling, if prolonged, will make *increased* profitability difficult.

However, UK results in the second-half should benefit from the new PVC and insulation glass plants coming on stream. Overseas profits are expected to continue to improve.

At midway trading profits in the UK fell £2m to £10.8m. The European side raised the surplus £1m to £2.6m and overseas by £1.5m to £11.4m.

After tax of £8.5m (£9.8m) stated earnings per £1 share are down from 10.02p to 7.2p.

The pre-tax profit was struck after expenses of £2.1m (£1.5m), and associated companies' financing charges up from £4.1m to £5.6m.

After minorities of £2.5m, against £2.1m, the attributable profit is down from £9.4m to £7.8m.

Tricentrol

Tricentrol is to provide for the £104,527 royalty *interest due to* Opman International (UK) for its share of Thistle Field production for the three months to August 31, by placing 46,500 of its ordinary shares.

Weir Group

INCLUDING a higher interest charge of £1.81m against £1.26m, taxable profits of Weir Group, engineering concern, fell from £4.52m to £3.35m for the 25 weeks ended June 22, 1979. Profits in the previous year were down from a record £9.12m to £7.6m.

Viscount Weir, the chairman, said last May that the *combination of difficulties in January and* February, and the bunching of majr contract completions later *in the year,* would result in higher earnings in the second half of 1979 against those of the first.

Because of the uncertainty of the national engineers' strike, the directors are unable to make a realistic forecast of results for the full year.

For the same reasons it considers that it would not be *prudent to increase the interim* dividend — the net figure is 1.8634p per 25p share, last year's final being 3.8599p.

Earnings are shown as 7.1p (10.6p) per share.

The directors explain that the disappointing half-year results were due to the strike, which continued into early 1979 at the group's largest steel foundry, to the winter's transport trouble, to poor demand and severe competitive pressure on margins in the steel foundry industry, and to the overvalued pound.

Apart from the valve companies the engineering businesses held up well, they state, and satisfactory progress continues with the desalination contracts.

The engineering supplies companies produced improved results, they add.

	25 weeks 1979 £000	1978 £000	Year 1978 £000
Turnover	84,704	87,542	183,532
Profit	5,154	5,776	10,130
Group	4,185	5,236	8,965
Associates	969	540	1,165
*Int. payable	1,809	1,360	2,529
Profit before tax	3,345	4,416	7,601
Tax	1,500	1,800	2,292
Profit after tax	1,845	2,716	5,309
Minorities	87	66	183
Extraord credit	48	359	†184
Attributable	1,806	2,990	4,942

* Less receivable. † Debit.

Wilkins and Mitchell

Taxable profits of Wilkins and Mitchell, the Servis domestic appliances and power presses group, were £518,000 in the first-half of 1979 on turnover of £25.6m. This compares with a £644,000 surplus (£611,000 loss) on £26.4m turnover *in the half-year* to September 30, 1978.

The 1978 pre-tax profit was struck after an exceptional credit of £473,000. Losses of the Australian subsidiary cut the *surplus by £422,000.*

The Australian subsidiary was put into receivership in December 1978 and *the directors,* announcing results for the 39 weeks to December 31, 1978, said *full provision had been made for* all the trading and investment losses incurred in the operation.

In the 39 weeks to the end of last year the group turned in taxable profits of £939,000. The *figures were for only 39 weeks to* reduce disparity between the two halves.

In June this year the Board reported that the group had made a major recovery in all aspects of business with the *exception of* Australia.

The directors now say the renewed disruption in the engineering industry makes it difficult to forecast for the second-half. However, orders *in the domestic* appliance side remain buoyant.

After tax of £286,000, against £395,000, stated *earnings per 25p* share are up from 3.38p to 3.61p. The net interim dividend is being held at 0.75p. *Last year's final* was 0.91p.

Retained profits are down from *£201,000 to £154,000.*

Wilson (Connolly)

FROM increased turnover of £13.67m against £10.69m, profits before tax *of Wilson (Connolly)* Holdings rose from £1.55m to £2.53m in the first six months *this year* and the directors are raising the interim dividend from 1.4811p to 3.5p.

First half profit includes rental income of £212,000 (£192,000) and in the previous period, £181,000 surplus on sale of properties held as fixed assets.

Tax charge is £1.32m (£807,000) giving earnings per share of 23p against 14.1p. For last year, the group reported pre-tax *profits of* £3.53m on turnover of £25.84m.

Activities of the group include private house building, industrial building contracting, property *investment and dealing.*

H. Woodward

After profit margins had been hit by severe competition in the commercial vehicle market the taxable surplus of H. Woodward *and Son slipped from £215,663 to* £184,344 in the half-year to March 31, 1979. Turnover rose from £5.04m to £5.35m.

The directors say there was also a fall-off in service and parts sales because of the road haulage dispute.

They add that gross profit margins are being held at a satisfactory level but overheads *beyond their control are hitting* net margins.

However, there is an upward trend in commercial *vehicle* sales in the current half and the service and related specialist departments are showing higher business volume. The Wigan branch became fully-operational in November last year.

The net interim dividend per 12½p share is maintained at 0.5p. Last year the group paid a total of 2.057p from taxable profits of £558,661, against £575,475.

Tax for the half-year takes £95,859, against £104,030.

Yorkshire Chemicals

ALTHOUGH SALES were some 10 per cent higher at £12.2m, taxable profits of Yorkshire Chemicals dropped from £865,000 to £348,000 for the first half of 1979.

The result was struck after depreciation, interest and realised exchange losses totalling £1.42m (£1.3m). In addition, there was £84,000 (nil) compensation for loss of office to two former directors.

Comparatives have been restated to effect the amended treatment of Brazilian exchange *losses referred* to in the 1978 accounts.

The directors explain that *realised exchange losses* on *customers'* remittances, at £295,000 (£148,000), were exceptionally heavy because *of the* continued strength of sterling. The effect of unfavourable exchange rates is *particularly serious* for the group since around 75 per cent of its output is sold abroad.

Sales were *maintained during* the lorry drivers' strike and during the bad weather at the beginning of the year, but work-in-progress and finished stocks were considerably reduced and consequently sales were restricted during the second quarter of the year because of inability to supply in full the demand for the group's products.

The loss to the group resulting from the lorry drivers' strike is estimated at £300,000.

On second half prospects, the directors say the group should be able to achieve a level of sales volume no less than that achieved in the first half. With more outstanding orders than for some time, coupled with a modest improvement in selling prices in some areas, the group has the prospect of a better trading profit than the "very unsatisfactory" figures currently reported.

Whether improved profits materialise, however, will very much depend upon the movement of exchange and interest rates and the group's ability to minimise the effect of general cost increases in the coming months.

The net interim dividend is maintained at 2.39525p per 25p share— last year's total was 4.5390683p on £1.11m taxable profit.

Capital expenditure during the six months was £795,000 and is expected to be £1.2m for the full year. All major new production projects are now operating and current unfinished projects are mainly concerned with improvements to existing production plants.

Home Counties Newspapers

Further progress is reported by Home Counties Newspapers in the first half of 1979. On turnover ahead from £3.7m to £4.7m the pre-tax surplus rose *from £429,000 to £603,000.*

The net interim dividend is being raised from 1.5p to 2p. Last *year's total payment* was 5p on taxable profits ahead from £709,000 to £955,000.

After tax of £331,000 (£232,000) stated earnings per 25p share are up 3p at 10.88p.

The directors point out that during the half-year the group has been buying newsprint on terms which are unlikely to be as advantageous in the second half. They add that advertisement revenue has held at a reasonable level so far, but it is too early to predict the trading *pattern for the rest of the year.*

BIS up 21% to £0.58m

Turnover of the Business Intelligence Services group increased by 28 per cent to almost £5m and pre-tax profits rose by 21 per cent to £583,000, in the year ending February, 1979.

Mr. Brian Allison, chairman, considered performance to be most encouraging with results in line with budgets in all operations."

The overall growth rate was slightly lower than last year as a result of a decision to hold expansion within the available resources. Main activities of BIS are data processing consulting and software, multi-media education, marketing research, and direct mail marketing.

During the year, overseas sales by UK and foreign subsidiaries increased to over £3m, 48 per cent of group turnover. UK direct export sales totalled £1m of this figure.

With the result of the Iranian crisis and the recent oil price rise slowing economic growth in the U.S., Mr. Allison considers that the general economic outlook for many of the major European economies must be gloomy. However, "we have *fortunately* chosen to be in the management information business which, to date at least, *has been relatively unaffected by* economic cycles."

He therefore expects the group to meet the fiscal 1980 targets of around £7m turnover and £750,000 in pre-tax profits without great difficulty. Half-year performance has been most encouraging and supports this prediction.

VONTOBEL EUROBOND INDICES

14.5.76=100%

PRICE INDEX	28.8.79	4.9.79	AVERAGE YIELD	28.8.79	4.9.79
DM Bonds	100.36	100.39	DM Bonds	7.274	7.266
HFL Bonds & Notes	97.54	97.44	HFL Bonds & Notes	8.797	8.816
U.S. $ Strt. Bonds	94.89	94.33	U.S. $ Strt. Bonds	9.826	9.917
Can. Dollar Bonds	95.29	94.94	Can. Dollar Bonds	10.442	10.616

هكذا من الأصل

هكذا من الأصل

Go past any junkyard and you will see just a sample of what corrosion costs this country.

But the full story is even more depressing.

According to one official source corrosion costs this country a staggering £10 million a day!

Which is a fairly pressing argument for making some changes in attitude. Many designers, engineers, specifiers and buyers have already taken up the challenge. They are looking afresh at materials like stainless steel.

And they are being convinced by the total cost argument for stainless steel; that in the end stainless is cheaper than and outperforms conventional raw materials, especially when you look at the maintenance costs and longevity of each. That's why there's an ever-growing list of new products being developed and sold using stainless steel.

Products that demonstrate that good design and good construction can be successfully and economically wedded to long life.

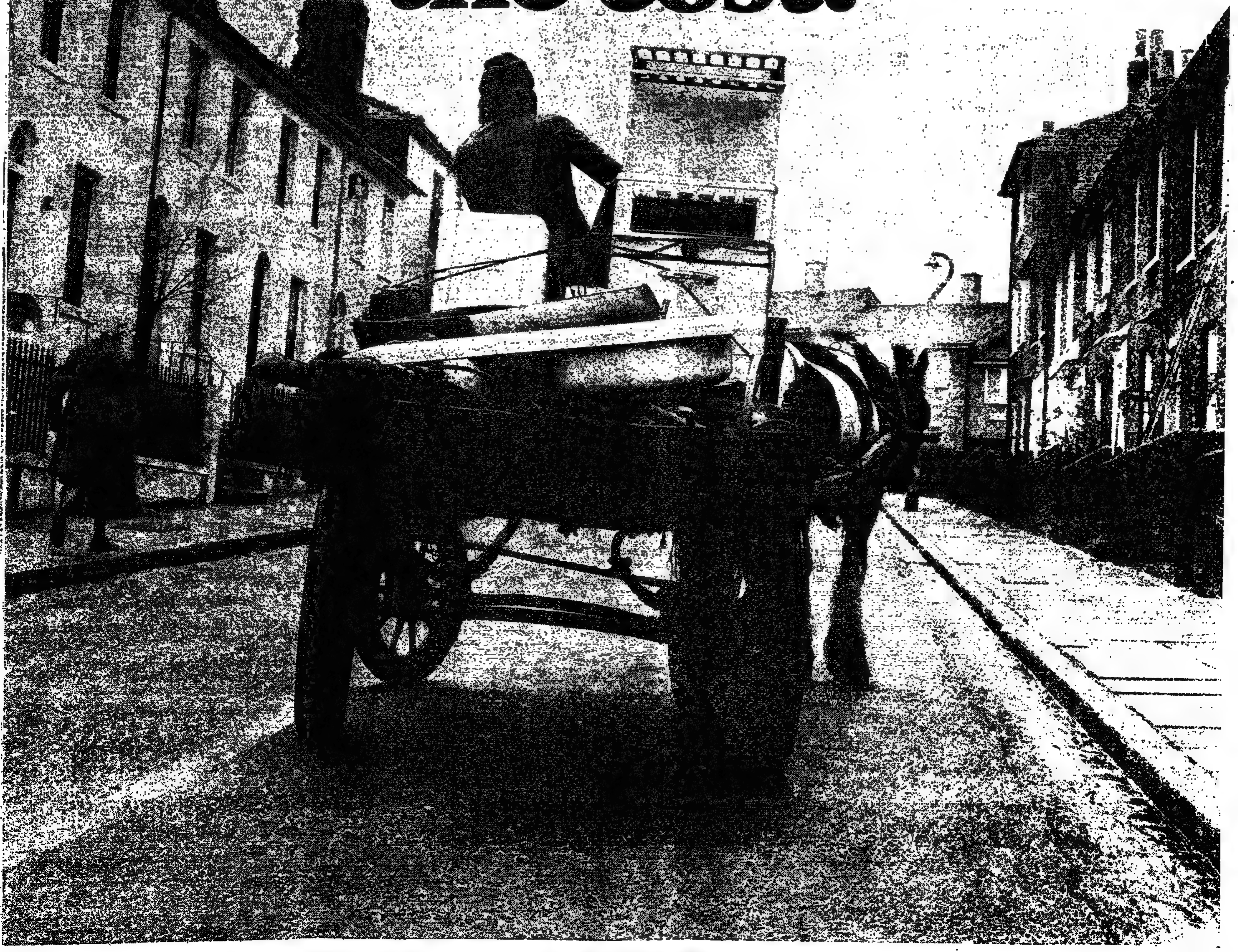
A product made from stainless steel has the ability to satisfy the customer totally. Through design, through manufacture, through price and through performance.

As a businessman you should look again at stainless steel for your products. After all, the cost of the alternatives is already being totted up.

If you would like to talk more about the possibilities of stainless steel contact John Fletcher, BSC Marketing, P.O. Box 161, Shepcote Lane, Sheffield S9 1TR.

BSC stainless

One way of totting up the cost.



Electronics in the office: Nexos' bold strategy

BY MAX WILKINSON

WHY should an affiliate of Exxon, the world's largest oil corporation, wish to team up with Nexos, the British Government's fledgling office equipment company?

One important connection is that Exxon, for all its vast size, is also a relative newcomer to the world of electronics, computers and office systems. The affiliate which has concluded the deal with Nexos, called Delphi, was only founded in 1972. In all, Exxon has spent some $100m on 25 new ventures. They include the successful Zilog, a microelectronics company, Vydec, a word processor manufacturer and Qwip, which makes telephone facsimile equipment.

So, like Nexos, which was established a year ago as a strategic centre for a new British industry, Exxon has been doing some fundamental thinking about the way in which offices will be organised towards the end of the century.

Like others who have gazed into this subsection of the future, they have seen that a special kind of computer will be used at the centre of a web of communications links. It will join typewriters, television screens, copiers, telex, magnetic files and telephones all into one huge, interconnected information system.

Mr. Muir Moffat, managing director of Nexos.

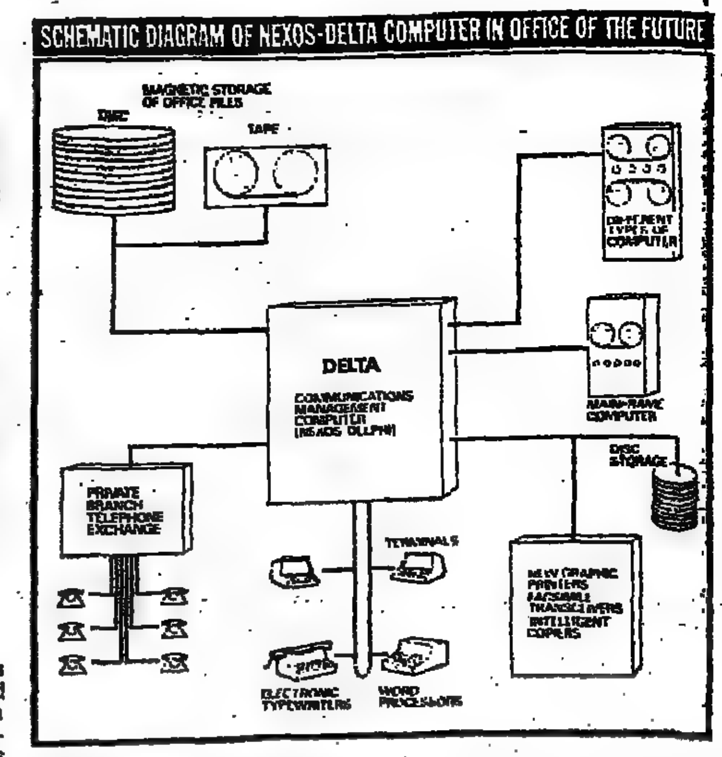
However, Exxon and Nexos *are looking even further ahead* to what they believe will be a new era of office communications in which office workers will talk to computers in natural speech.

Conversations with the computer are expected to take two basic forms: the first will be a system of voice commands by which users will gain access to the electronic files. Instead of pressing buttons on a keyboard, an executive will be able to speak directly into his telephone set to call up a file on to a television screen. With a few staccato words like "next page," or "go back," he will be able to move through the files and he will also be able to make simple alterations with commands like "*delete*."

However, speech will also be used as a means of storing information within the computer. *At present speech* almost always has to be converted into text at a keyboard before it can be stored electronically. The new systems, it is envisaged, will be able to store messages in spoken form to be played back at a later time.

The system will first encode the voice waves into a digital form (a series of electric bleeps). Then the computer will be able to perform a wide variety of operations on the voice: indexing passages, separating two halves of a conversation or synchronising *spoken words with data* typed in from a terminal.

In the new generation of office system it is intended that *the whole of the conversation* between the executives, including the figures and text shown on television screens, at their desks could be recorded by the computer.



This integral recording of voice and data would clearly be a rapid method for briefing any other executives not present at a particular discussion. The entire process of writing, typing and distributing reports could in some cases be short circuited.

Mr. Muir Moffat, Managing Director of Nexos, says that almost no existing computers are suited to such dual processing of speech and data. This is because 500 times as many digits (computer bleeps) would be needed to encode the speech rhythms for the word "CAT" than would be needed to encode the three separate letters C, A and T. It is not surprising, therefore, that the electronic pipelines in most office computers are not wide enough to accept coded speech.

On the other hand, a special range of computers has *been* developed with wide pipelines to accept the speech channels for telephone switching. But these digital telephone exchanges need only relatively modest computing power.

Fortunately for Nexos, Delphi was looking around Europe for an outlet for the new machine it has developed at just about the time that Nexos was formulating its own requirements.

The result, called the Delta 2, is claimed to be the world's fastest computer, capable, in its largest configuration, of executing 250m instructions per second.

However, the most important point about the computer from Nexos's point of view is that the electronic pipelines inside it are big enough to handle voice channels as well as other equipment needing wide pipelines ("bandwidth" is the technical term) including facsimile transceivers.

Nexos was established under the last Government in January with funding of £40m to create a strategy, marketing and research for a group of UK companies in the office systems area. It is clear that the present Government has now given its blessing to the plan. Nexos has paid $2m for the exclusive *European marketing* rights and has undertaken to spend a further $2m on software (programming). It is expected that about $8m will be needed before the venture can generate profits.

Nexos has therefore embarked *upon* a *bold strategy* of going for a completely new concept in office systems, aimed at very large customers. The minimum-sized system is likely to cost around £200,000, but they could range up to £1m and beyond.

Nexos believes it has stolen a march on its competitors with its ideas for integrating voice into the computer systems. But it still has to develop, market and then sell the concept. If it has backed a winner, Nexos will become a major European company with sales of perhaps £50m to £100m — its critical size for survival. But we shall have to wait until the mid-1980s to find out if it has done so.

WEEK'S FINANCIAL DIARY

The following is a record of the principal business and financial engagements during the week. The Board meetings are mainly for the purpose of considering dividends and official indications are not always available whether dividends concerned are interims or finals. The sub-divisions shown below are based mainly on last year's timetable.

TODAY, AUGUST 10

COMPANY MEETINGS—
Celestion Inds., Brown's Hotel, Dover Street, W. 12
Colmore Invs., 20-30, Hill Street, Birmingham, 3
Hicking and Pentecost, Albany Hotel, Mount Street, Nottingham, 12
Mining Supplies, Danum Hotel, High Street, Doncaster, 12
Second Great Northern Inv. Tst., 175, West George Street, Glasgow, 10.30

BOARD MEETINGS—
Finals:
Anglo-African Finance
Cantors
Esperanza
Glendevon Inv. Tst
Interims:
Barton and Sons
Beatson Clark
Elbar Inds.
Electrical Ind. Secs.
Huntleigh
Merchants Trust
Metal Closures
Pentland Inds.
Revertex Chemicals

DIVIDEND & INTEREST PAYMENTS—
AMF Inc. 31 cts.
Agricultural Mort. 6½pcDb. 1985-90 3¼s. Do. 7¼pcDb. 1981-84 3⅞pc. Do. 9¼pcDb. 1980-85 4⅝pc
Barnes 20 cts.
CSC Inv. Tst. 2.75p
Citicorp Overseas Fin. Gtd. Fltg. Rate Nts. 1994 US$ 27.91
Gen. Motors 115 cts.
Grace (W. R.) 51¼ cts.
Intnl. Business Machines 86 cts.
Kraft Inc. 75 cts.
Lowe (Robert H.) 1.33p
Mobil Cpn. 60 cts.
Newcastle-upon-Tyne 9¼pcCons.Rd. 1978-1980 4⅝pc
Purolator Inc. 33 cts.
Rockwell Intnl. 65 cts.
Texaco Inc. 54 cts.
Travelers Cpn. 52 cts.
Treasury 5½pc 2008-2012 2¾pc
Utd. Technologies 55 cts.
Ward 1.19p
Warner-Lambert 33 cts.

TOMORROW, AUGUST 11

COMPANY MEETINGS—
Associated Leisure, Orchid Suite, The Dorchester, Park Lane, W. 12
Equity Consort Inv. Tst., New Court, St. Swithin's Lane, EC. 2.45
Ingram (Harold), 21, Newman Street, W. 11.30

BOARD MEETINGS—
Finals:
Herrburger Brooks
Staffordshire Potteries
Stewart Plastics
Interims:
Bowater
Cosalt
Farmer (S. W.)
Home Charm
LK Ind.
Lyon and Lyon
Magnolia Grp. (Mouldings)
Ofrex
Pentos
Reckitt and Colman

DIVIDEND & INTEREST PAYMENTS—
Celestion Inds. 1p
Ingram (Harold) 2.25p
Tenneco Inc. 55 cts.

WEDNESDAY, AUGUST 12

COMPANY MEETINGS—
Amalgamated Distilled Prods., North British Hotel, Princess Street, Edinburgh, 12
Elliott (B.), Savoy Hotel, Strand, WC. 12.15
Hollas Grp., Century House, Ashley Road, Hale, Altrincham, Cheshire, 11

BOARD MEETINGS—
Finals:
Clark (Matthew)
Douglas (Robert M.)
Meynards
Nrthrn. Ind. Improvement Tst.
Interims:
Allen Harvey and Ross
BSR
Babcock and Wilcox
Biddle
Carpets Intnl.
Danish Bacon
Desoutter Bros.
Evered
Jones (A. A.) and Shipman
Rockware
Tilling (Thomas)

DIVIDEND & INTEREST PAYMENTS—
Amalgamated Distilled Prods. 0.8p
Birmid Qualcast 1.5p
Bullough 4.2p
Equity-Consort Inv. 5.425p. Do. Dfd. 6.65p
Ford Motor BDRs 5 cts.
Lincroft Kilgour 1.75p
Russell (Alexander) 2.312p
Second Grt. Nrthrn. Inv. Tst. 1.45p

THURSDAY, AUGUST 13

COMPANY MEETINGS—
Associated Communications, ACC House, 17, Great Cumberland Place, W. 12
Crown House, Connaught Rooms, Great Queen Street, WC. 11
Denbyware, Langley Mill, Nottingham, 2.30
Elliott (E.), Bescot Crescent, Walsall, West Midlands, 12
Howden, 195 Scotland Street, Glasgow, 12
McLeod Russel, Conference Room "A", Victoria House, Vernon Place, WC. 12
Mitchell Somers, Hyde Park Hotel, Knightsbridge, SW. 12
Morgan Edwards, Featherbed Lane, Shrewsbury, 12
NMC 25-35, City Road EC. 11.30
Sekers Intnl., Connaught Rooms, Great Queen Street, WC. 12
Utd. Gas Inds., Crown Room, Connaught Rooms, Great Queen Street, WC. 12

BOARD MEETINGS—
Finals:
Coronation Syndicate
Decca
West of England Tst.
Interims:
Bifurcated Engineering
Booker McConnell
British Mohair Spinners
Camrex
Crouch (Derek)
Dutton-Forshaw
Fisher (James)
Gibbons Dudley
Harmony Gold
Lead Inds.
Noble and Lund
Pearson Longman
Pearson (S.)
Prudential Cpn.
Richards and Wallington
Rosedimond Inv. Tst.
Royal Dutch Petroleum
Sale Tilney
Shell Transport and Trading
Wilkes (James)
Winston Estates

DIVIDEND & INTEREST PAYMENTS—
Berwick Timpo 1.5738p
Lex Service 2.8p
Stakis (Reo) Orgn. 0.384p
UC Invs. 9.17733p
Wellman Engineering 1.41p

FRIDAY, AUGUST 14

COMPANY MEETINGS—
Associated Tooling, Institute of Directors, 116, Pall Mall, SW. 12
Avana Grp., Park Hotel, Cardiff, 3
Bevan (D. F.), Midland Hotel, New Street, Birmingham, 12.15
Letraset, Cafe Royal, Piccadilly, W. 12.15
RFD, Winchester House, Old Broad Street, EC. 12
Ransom (William), 104, Bancroft, Hitchin, Herts., 3.45
Thorn Electrical, Dorchester Hotel, Park Lane, W. 12
Waddington (J.), Wakefield Road, Leeds, 12

BOARD MEETINGS—
Finals:
Bracken Mines
Kinross Mines
Leslie Gold Mines
St. Helena Gold Mines
Winkelhaak Mines
Interims:
Brown and Jackson
Early (Charles) and Marriott
Oliver (George) (Footwear)
Tavener Rutledge

DIVIDEND & INTEREST PAYMENTS—
Amber Ind. 2.1384p
Ariel Inds. 1.417p
Associated Tooling Inds. 1.631318p
Border and Southern Stockholders Tst., redemption of 3½pc1stDb. 1974-79 with accrued interest. Do. Db. 2¼pc
Conoco Inc. 42½pc
Cummins Engine Inc. 45 cts.
Dana 37 cts
Dart Inds. 45 cts.
Elliott (E.) 2.5p
Gerrard and Natl. Discount 5pcPf. 2.1pc
Hutton (E. F.) Inc. 20 cts.
Ind. and Commercial Finance Cpn. Db.Ln. £4.77
Leyland Paint and Wallpaper 1p
Lucas Ind. Ln. 3¼pc
Nash (J. F.) Secs. 3p
Schlesinger Gilt Fund Ptg.Pf. 0.6875p
Stroud Riley Drummond 1p
Tex Abrasives 2.423545p
Town and City Props. 0.01p
Yeoman Inv. Tst. 4p

SATURDAY, AUGUST 15

DIVIDEND & INTEREST PAYMENTS—
Austrian 6¼pcBds. 1982 3¼pc
BICC Dbs. 3¼pc 3½pc
Dalgety Db. 3½pc
Dover Cpn. 43 cts.
Gloucestershire 5¼pcRd. 1977-80 2⅝pc
Hain Shipping Ord. A 4p
Greater London 7¼pc 1981 3⅞pc
London County 5½pc 1977-81 2¾pc
Middlesex 5¼pcRd. 1980 2⅝pc
Monks Inv. Tst. Db. 3.75pc
Northern Rhodesia 5pc 1975-80 2½pc
Owens Illinois 31½ cts.
Redfearn Natl Glass Db. 5¼pc
Reliance 40 cts.
Singer 10 cts.
Stockport 12¼pcRd. 1985 6⅛pc
Surrey 6pcRd. 1978-80 3pc
TRW Inc. 50 cts.
Treasury 9pc 1992-96 4½pc
Wrexham and E. Denbighshire Water 4.9pc (fmly 7pc) Cons.Ord. 2.45pc. Do. 3.5pc (fmly. 5pc) Cons Pf 1.75pc Do. 4.2pc (fmly. 6pc) Rd.Pf. 1985-87 2.1pc

SUNDAY, AUGUST 16

DIVIDEND & INTEREST PAYMENTS—
Agricultural Mort. 7¾pcDb. 1991-93 3⅞pc. Do. 9pcDb. 1979-82 4½pc. Do. 9½pcb. 1981-83 4¾pc. Do. 9½pcDb. 1983-86 4¾pc
New Zealand 3½pc 1981-84 1¾pc
Treasury 14pc 1982 7pc

CONTRACTS AND TENDERS

OIL EXPLORATION AND EXPLOITATION INTERNATIONAL BID

Peoples Democratic Republic of Yemen (P.D.R.Y.) Petroleum and Minerals Board (P.M.B.)

announce the offering of the below shown open areas (Nos. 1-5):

Terms are based on "Production Sharing."

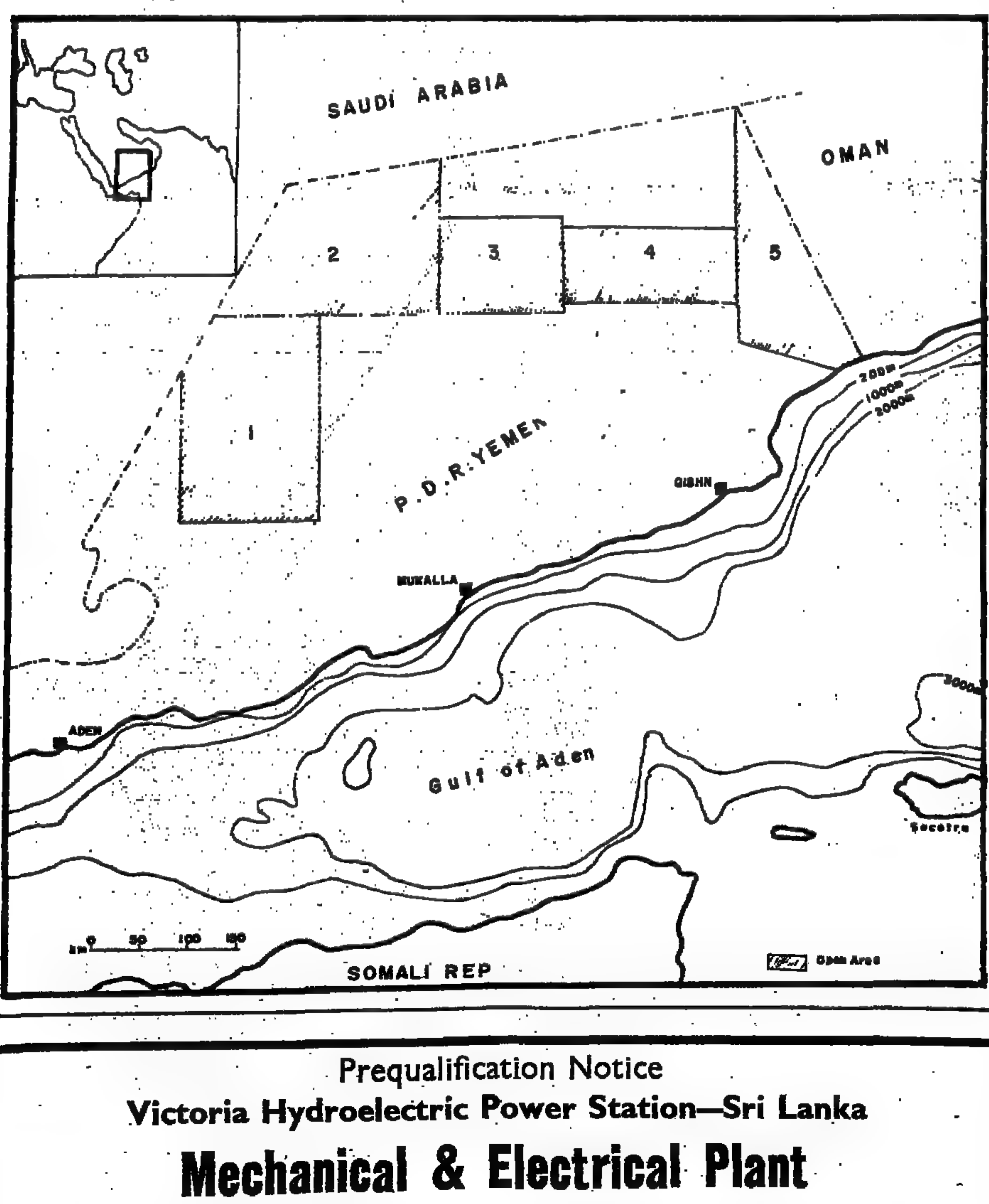
Minimum obligation should be supported by Letter of Guaranty, but not less than Seismic Survey and drilling of two wells within the first three years.

Cost of recovery out of 40% for company. The rest 60% is split between P.M.B. and company.

Data is available for investigations at P.M.B. Office, Aden.

For further information communicate with Cable: YNOC, Aden. Tel. 24155/24993. Telex: 215 AD.

P.M.B. Chairman.



Prequalification Notice
Victoria Hydroelectric Power Station—Sri Lanka
Mechanical & Electrical Plant

The Mahaweli Authority of Sri Lanka invites submission of pre-qualification information from suitably experienced British Manufacturers who can qualify through experience in manufacture of plant of similar type, size and rating for the design, manufacture, supply, testing erection, setting to work and maintenance for 1 year of any or all of the following complete sections:—

A. 3—Vertical Shaft Francis Turbines operating under a design head of 191 metres at 333 rpm and capable of delivering a design output of 72 mw and a maximum continuous output of 83 mw, together with governors, inlet valves and all ancillary equipment.

B. 3—Alternating Current Generators for direct coupling to turbines as detailed above and having a design rating of 82.5 MVA 0.85 power factor and maximum continuous rating of 95 MVA at 0.95 PF and 12.5 KV together with excitation equipment.

C. 3—MVA Generator Transformers ONAF cooling, 12.5/132 KV or alternatively 12.5/220 KV or 12.5/275 KV in single phase units and 2—5 MVA station transformers Onan cooling, 132/3.3 KV or alternatively 220/3.3 KV or 275/3.3 KV.

D.—Four bays of 132 KV, or alternatively 220 KV, or 275 KV SF6 switchgear equipment in the "breaker and a half" configuration at the Victoria Power Station and possibly four bays of 132 KV, or alternatively 220 KV, or 275 KV switchgear in "double busbar" arrangement at Gampola, 28 KM from Victoria. Protection and control equipment for switchgear, for turbines, generators and power station auxiliaries.

Also included in this section are the generator isolated phase connections.

E. MV and LV swithgear and station miscellaneous plant including 3.3 KV switchgear, 400-V switchgear, 3.30/0.4 KV transformers, lighting and small power services, 250 KVA diesel generator, battery installations and fire fighting equipment.

F. Power station cabling including 132 KV, or alternatively 220 KV, or 275 KV, oil-filled cables, 3.3 KV cables, multicone and telephone type cables, marshalling boxes, racks, cleats and earthing facilities.

G. Cranes, including a 150 to 200 tonne E.O.T. crane, and auxiliary lifting gear.

H. 2—28 KM double circuit 132 KV, or alternatively 220 KV or 275 KV transmission lines.

The Victoria Power Station will be located on the Mahaweli Ganga River approximately 5 km downstream of the Victoria Dam which is itself located near the Victoria Falls about 16 km east of Kandy.

Financing will be derived from agencies who have stipulated that only British Manufacturers will be invited to submit tenders for these works. Preliminary information on the project and instructions for firms wishing to apply for prequalification to tender are available by application to:—

Preece, Cardew and Rider, Consulting Engineers, Paston House, 165-167, Preston Road, Brighton BN1 6AF, and quoting reference 4046/01.

Such applications should be made immediately since prequalification data received after October 2, 1979, may not be considered.

CENTRAIS ELETRICAS BRASILEIRAS S.A. — ELETROBRAS

NOTICE TO PROSPECTIVE SUPPLIERS BRAZILIAN INTERCONNECTED POWER SYSTEM SUPERVISION AND COORDINATION CENTER

Centrais Eletricas Brasileiras S.A.—ELETROBRAS is applying for a loan from the International Bank for Reconstruction and Development (IBRD) towards the cost of a Real-Time Supervision System (RTSS) for the operation of the Brazilian Interconnected power system to be located at the National Supervision and Coordinating Center (CSC). ELETROBRAS intends to apply the proceeds of such loan to eligible payments under the contracts for which an official invitation and specifications for tenders will be issued approximately at the end of September, 1979.

The Bid will cover the supply of all hardware, software, system integration, services and training necessary to provide a completely operational system and shall include computers, peripherals, man-machine interface, support software, application software and the interface with telecommunication system. CSC will communicate directly with the Operation Control Centers (COS) of up to eleven major electric power companies.

The National Supervision and Coordinating Center facilities, together with the above referred COS's, will form a hierarchical control system for the operation of the Brazilian interconnected power system. The functions to be implemented at the RTSS include Production Scheduling and Coordination, Real-Time Supervision of the Main Grid, Interchange Accounting and Operations Analysis and Reporting. The installed capacity of the interconnected system (mainly hydroelectric) is now about 22,000 MW and is expected to increase to about 42,000 MW by 1986; the system will then have EHV-DC and AC transmission at 750/500/440/345/230 KV.

Prospective bidders who are located in Switzerland or member countries of the IBRD, are hereby notified that a summary description of the project is now available at no cost and may be obtained by prospective bidders through a formal request signed by an official representative, at the following address:

Cia. Auxiliar de Empresas Eletricas Brasileiras (CAEEB),
Coordenador de Compras,
Av. Rio Branco, 133-12° andar,
P.O. Box 883,
Rio de Janeiro, ZC-00,
Brazil.

At the time of the issue of the bid documentation the suppliers and manufacturers who have indicated their desire to be included in a mailing list will receive an official invitation to participate in the bidding. This documentation will be made available at a cost of U.S.$500.00 (or equivalent) and can only be obtained from Cia. Auxiliar de Empresas Eletricas Brasileiras.

GENERAL MINING & FINANCE CORPORATION LIMITED

(Incorporated in the Republic of South Africa)

UNAUDITED CONSOLIDATED FINANCIAL RESULTS FOR THE SIX MONTHS ENDED 30 JUNE 1979 AND DIVIDEND DECLARATION

	Six months ended		Year ended
SUMMARY	30.6.79	30.6.78	31.12.78
Earnings per share	107c	68c	151c
Dividend per share	25c	21c	60c
Net asset value per share	1,610c	1,185c	1,367c
Total number of shares	42,000,000	41,613,680	42,000,000
INCOME STATEMENT	R'000	R'000	R'000
Operating income	96,864	69,147	157,092
Income from investments	33,869	23,086	51,455
Surplus on realisation of investments	4,430	1,997	12,499
	135,163	94,230	220,995
Less:			
Amortisation of mining investments and mining assets	4,512	3,564	10,059
Interest paid	20,098	17,144	38,600
Exploration and development costs	4,651	6,068	12,604
Provision against investments	—	—	7,037
	29,261	26,776	68,330
Group income before taxation	105,902	67,454	152,666
Taxation	22,171	13,474	28,298
Group income after taxation	83,731	53,980	124,368
Outside shareholders' interest and preference dividends	38,815	25,660	61,007
Income attributable to ordinary shareholders	44,916	28,320	63,361
Ordinary dividends			
—interim 25 c.p.s. (21 c.p.s.)	10,500	8,635	8,635
—final (39 c.p.s.)	—	—	16,192
Income retained	34,416	19,685	38,534
BALANCE SHEET	30.6.79	30.6.78	31.12.78
	R'000	R'000	R'000
Ordinary shareholders' interest	331,294	279,911	294,462
Outside shareholders' interest	386,991	319,701	330,886
Group equity	718,285	599,612	625,348
Loan capital	167,439	190,209	188,815
Preference share capital—6%	500	500	500
Deferred taxation	39,449	37,206	39,038
Capital employed	925,673	827,527	853,701
Employment of capital			
Investments—listed	283,890	242,874	273,471
—(market value)	(756,698)	(462,526)	(647,438)
—unlisted	34,168	52,832	32,209
—(directors' valuation)	(63,611)	(150,001)	(60,178)
	318,058	295,706	305,680
Fixed and mining assets	475,949	396,753	430,767
Current assets	559,727	460,510	523,391
Loans	63,731	46,109	50,850
	1,417,465	1,199,078	1,310,688
Current liabilities	491,792	371,551	456,987
Net assets	925,673	827,527	853,701

NOTES TO THE INTERIM REPORT

1. **Financial Results**

The earnings per share show an improvement of 57 per cent compared with the corresponding six months of 1978. The contributions of the various divisions to income attributable to ordinary shareholders are summarised in the following sectors:

	Six months ended 30.6.79		Year ended 31.12.78	
	Rmillion	%	Rmillion	%
Gold and Uranium	9.7	19.2	17.3	22.2
Platinum	1.0	2.0	2.7	3.5
Coal	5.3	10.5	9.8	12.6
Minerals and beneficiation	5.3	10.5	7.9	10.1
Commerce and Industry	19.7	38.9	23.8	30.6
Financial	2.8	5.5	6.4	8.2
Management services and other	6.8	13.4	10.0	12.8
	50.6	100	77.9	100
Less Interest paid	− 1.7		− 3.8	
Exploration costs	− 4.0		−10.7	
Income attributable	44.9		63.4	

No provision for the writing down of investments has been made in the accounts for the half-year as this is considered at the year-end.

Shareholders are again reminded that investment income and certain expenses do not accrue evenly throughout the year.

2. **Northern Transvaal Coalfield**

The Northern Transvaal coalfield, in which General Mining has a 50 per cent interest, continues to receive much attention. The potential resources have been further supplemented by prospecting and may be classified in the following main categories:

- an area containing blend coking coal
- areas containing medium quality steam coal with indications of significant concentrations of uranium
- limited areas where coal is poorly developed but where uranium is present
- reasonably large areas containing medium or low quality steam coal where uranium is insignificant.

Northern Transvaal coal has properties which differ considerably from Eastern Transvaal coal and appears, in certain cases, to be more reactive to chemical processes. Management is investigating and evaluating, on a laboratory scale, various possibilities involving complicated technology before any idea of feasibility can be formed.

3. **Taxation**

In the 1978 annual report it was mentioned that a dispute existed with the Receiver of Revenue in regard to the admissibility of certain expenditure for taxation purposes, and that arising therefrom taxation assessments for previous years had been received which had the effect of reducing the company's assessed loss by approximately R20 million. It was also stated that in this regard the company had appealed to the Special Court for the hearing of tax appeals. Before the date of hearing the company was informed that the State had abandoned the case. The assessed loss at 31 December 1978 amounted to R18.8 million.

4. **Subsidiary Companies**

During the period under review General Mining increased its effective holding in Union Corporation from 48.2 per cent to 48.9 per cent, and Union Corporation increased its shareholding in the undermentioned subsidiaries as follows:

	30.6.79	31.12.78
Darling & Hodgson Limited	56%	55%
Evelyn Haddon & Company Limited	57%	55%

5. **Final Dividend**

The final dividend No. 105 of 39 cents per share declared on 13 March 1979 in respect of the year ended 31 December 1978, was paid on 4 May 1979, and absorbed R16,192,000.

On behalf of the board
W. J. de Villiers } Directors
J. L. van den Berg }

DECLARATION OF DIVIDEND

NOTICE IS HEREBY GIVEN that an interim dividend No. 107 (Coupon No. 109) of 25 cents per share in respect of the year ending 31 December 1979 has been declared payable to members registered at the close of business on 21 September 1979, and to holders of share warrants to bearer surrendering coupon No. 109.

The register of ordinary shareholders will be closed from 22 September to 5 October 1979, both days inclusive.

The dividend is declared in the currency of the Republic of South Africa. Payments from the United Kingdom office will be made in United Kingdom currency at the rate of exchange ruling on 22 October 1979, or on the first day thereafter on which a rate of exchange is available.

In the case of non-resident shareholders, tax of 15 per cent will be deducted.

Dividend warrants will be posted on or about 2 November 1979.

The full conditions of payment may be inspected at the head office or the offices of the transfer secretaries of the company.

By order of the board
L. J. Baines
London Secretary

Head Office:
6 Hollard Street
Johannesburg 2001
(P.O. Box 61820
Marshalltown 2107)

London Office:
Princes House,
95 Gresham Street,
London EC2V 7EN

Transfer Secretaries
South Africa:
Union Corporation Limited
Share Transfer Department
74-78 Marshall Street
Johannesburg 2001
(P.O. Box 61837
Marshalltown 2107)

United Kingdom:
Charter Consolidated Limited
P.O. Box 102, Charter House,
Park Street,
Ashford, Kent TN24 8EQ

6 September 1979

TENDERS MUST BE LODGED NOT LATER THAN 10.00 A.M. ON WEDNESDAY, 12th SEPTEMBER 1979 AT THE BANK OF ENGLAND, NEW ISSUES, WATLING STREET, LONDON, EC4M 9AA OR NOT LATER THAN 3.30 P.M. ON TUESDAY, 11th SEPTEMBER 1979 AT ANY OF THE BRANCHES OF THE BANK OF ENGLAND OR AT THE GLASGOW AGENCY OF THE BANK OF ENGLAND. TENDERS MUST BE IN SEALED ENVELOPES MARKED "TREASURY TENDER."

ISSUE OF £600,000,000

11½ per cent TREASURY STOCK, 1989

MINIMUM TENDER PRICE £95.50 PER CENT

PAYABLE AS FOLLOWS

Deposit with tender	£40.00 per cent
On Tuesday, 23rd October 1979	Balance of purchase money

INTEREST PAYABLE HALF-YEARLY ON 22nd FEBRUARY AND 22nd AUGUST

This Stock is an investment falling within Part II of the First Schedule to the Trustee Investments Act 1961. Application has been made to the Council of The Stock Exchange for the Stock to be admitted to the Official List.

THE GOVERNOR AND COMPANY OF THE BANK OF ENGLAND are authorised to receive tenders for £400,000,000 of the above Stock; the balance of £200,000,000 has been reserved for the National Debt Commissioners for public funds under their management.

The principal of and interest on the Stock will be a charge on the National Loans Fund, with recourse to the Consolidated Fund of the United Kingdom.

The Stock will be repaid at par on 22nd February 1989.

The Stock will be registered at the Bank of England or at the Bank of Ireland, Belfast, and will be transferable, in multiples of one new penny, by instrument in writing in accordance with the Stock Transfer Act 1963. Transfers will be free of stamp duty.

Interest will be payable half-yearly on 22nd February and 22nd August. Income tax will be deducted from payments of more than £5 per annum. Interest warrants will be transmitted by post. The first payment will be made on 22nd February 1980 at the rate of £4.3849 per £100 of the Stock.

Tenders must be lodged not later than 10.00 a.m. on Wednesday, 12th September 1979 at the Bank of England, New Issues, Watling Street, London, EC4M 9AA or not later than 3.30 p.m. on Tuesday, 11th September 1979 at any of the Branches of the Bank of England or at the Glasgow Agency of the Bank of England. Each tender must be for one amount and at one price. The minimum price, below which tenders will not be accepted, is £95.50 per cent. Tenders must be made at the minimum price or at higher prices which are multiples of 25p. Tenders lodged without a price being stated will be deemed to have been made at the minimum price.

A separate cheque representing a deposit of £40.00 per cent of the nominal amount tendered for must accompany each tender; cheques must be drawn on a bank in, and be payable in, the United Kingdom, the Channel Islands or the Isle of Man. Tenders must be in sealed envelopes marked "Treasury Tender." *Tenders must be for a minimum of £100 stock and for multiples of Stock as follows:—*

Amount of Stock tendered for	*Multiple*
£100—£2,000	£100
£2,000—£5,000	£500
£5,000—£20,000	£1,000
£20,000-£100,000	£5,000
£100,000 or greater	£10,000

Her Majesty's Treasury reserve the right to reject any tender or to allot a less amount than that tendered for. If undersubscribed, the Stock will be allotted at the minimum price, the balance of Stock, not tendered for being allotted at the minimum price to the Governor and Company of the Bank of England, Issue Department. If oversubscribed, all allotments will be made at the lowest price at which any tender is accepted (the allotment price), and tenders at prices above the allotment price will be allotted in full.

Letters of allotment in respect of Stock allotted will be despatched by post at the risk of the tenderer. No allotment will be made for a less amount than £100 Stock. In the event of partial allotment, the balance of the amount paid as deposit will be refunded by cheque despatched by post at the risk of the tenderer; if no allotment is made the amount paid as deposit will be returned likewise. Payment in full may be made at any time after allotment but no discount will be allowed on such payment. Default in the payment of the balance of the purchase money by its due date will render the deposit liable to forfeiture and the allotment to cancellation.

Letters of allotment may be split into denominations of multiples of £100 on written request received by the Bank of England, New Issues, Watling Street, London, EC4M 9AA, or by any of the Branches of the Bank of England, on any date not later than 19th October 1979. Such requests must be signed and must be accompanied by the letters of allotment.

Letters of allotment must be surrendered for registration, accompanied by a completed registration form, when the balance of the purchase money is paid, unless payment in full has been made before the due date, in which case they must be surrendered for registration not later than 23rd October 1979.

A commission at the rate of 6.25p per £100 of the Stock will be paid to bankers or stockbrokers on allotments made in respect of tenders bearing their stamp. However, no payment will be made where the banker or stockbroker would receive by way of commission a total of less than £1.

Tender forms and copies of this prospectus may be obtained at the Bank of England, New Issues, Watling Street, London, EC4M 9AA, or at any of the Branches of the Bank of England, or at the Glasgow Agency of the Bank of England; at the Bank of Ireland, P.O. Box 13, Donegall Place, Belfast, BT1 5BX; at Mullens & Co., 15 Moorgate, London, EC2R 6AN; or at any office of The Stock Exchange in the United Kingdom.

BANK OF ENGLAND
LONDON

7th September 1979.

THIS FORM MAY BE USED

For use by Banker or Stockbroker claiming commission—	
(Stamp)	VAT Regn. No. (If not registered put "NONE")

This form must be lodged not later than 10.00 a.m. on Wednesday, 12th September 1979 at the Bank of England, New Issues, Watling Street, London, EC4M 9AA or not later than 3.30 p.m. on Tuesday, 11th September 1979 at any of the Branches of the Bank of England or at the Glasgow Agency of the Bank of England. Tenders must be in sealed envelopes marked "Treasury Tender."

ISSUE OF £600,000,000

11½ per cent Treasury Stock, 1989

MINIMUM TENDER PRICE £95.50 PER CENT

TO THE GOVERNOR AND COMPANY OF THE BANK OF ENGLAND

I/We tender in accordance with the terms of the prospectus dated 7th September 1979 as follows:—

Amount of above-mentioned Stock tendered for, being a minimum of £100 and in a multiple as follows:—

Amount of Stock tendered for	*Multiple*
£100—£2,000	£100
£2,000—£5,000	£500
£5,000—£20,000	£1,000
£20,000—£100,000	£5,000
£100,000 or greater	£10,000

say, ... pounds — AMOUNT OF STOCK £

AMOUNT OF DEPOSIT(a)

Amount of deposit enclosed, being £40.00 per cent of the nominal amount of Stock tendered for:— £

TENDER PRICE(b)

The price tendered per £100 Stock, being a multiple of 25p and not less than the minimum tender price of £95.50:— £ : p

say, ...

I/We hereby engage to pay the balance of the purchase money when it becomes due on any allotment that may be made in respect of this tender, as provided by the said prospectus.

I/We request that any letter of allotment in respect of Stock allotted to me/us be sent to me/us by post at my/our risk.

(c) I/We declare that the tenderer is not resident outside the Scheduled Territories(d) and that the security is not being acquired by the tenderer as the nominee of any person(s) resident outside those Territories

..................September 1979   SIGNATURE..................

PLEASE USE BLOCK LETTERS   of, or on behalf of, tenderer

SURNAME OF TENDERER
MR/MRS/MISS OR TITLE ____________
FIRST NAME(S) IN FULL ____________
ADDRESS IN FULL ____________

a A separate cheque must accompany each tender. Cheques should be made payable to "Bank of England" and crossed "Treasury Stock." Cheques must be drawn on a bank in, and be payable in, the United Kingdom, the Channel Islands or the Isle of Man.

b *The price tendered must be a multiple of 25p and not less than the minimum* tender price. If no price is stated, this tender will be deemed to have been made at the *minimum* tender price. Each tender must be for one amount and at one price.

c If this declaration cannot be made it should be deleted and reference should be made to an Authorised Depositary or, in the Republic of Ireland, an Approved Agent, through whom lodgment should be effected. Authorised Depositaries are listed in the Bank of England's Notice EC 1 and include most banks and stockbrokers and solicitors practising in the United Kingdom, *the Channel Islands or the Isle of Man; Approved Agents in the Republic of* Ireland are defined in the Bank of England's Notice EC 10.

d The Scheduled Territories at present comprise the United Kingdom, the Channel Islands, the Isle of Man, the Republic of Ireland and Gibraltar.

TENDERS MUST BE LODGED NOT LATER THAN 10.00 A.M. ON WEDNESDAY, 12TH SEPTEMBER 1979 AT THE BANK OF ENGLAND, NEW ISSUES(X), WATLING STREET, LONDON, EC4M 9AA OR NOT LATER THAN 3.30 P.M. ON TUESDAY, 11TH SEPTEMBER 1979 AT ANY OF THE BRANCHES OF THE BANK OF ENGLAND OR AT THE GLASGOW AGENCY OF THE BANK OF ENGLAND. TENDERS MUST BE IN SEALED ENVELOPES MARKED "EXCHEQUER TENDER." **X**

ISSUE BY TENDER OF £500,000,000

12 per cent Exchequer Stock, 1999-2002

MINIMUM TENDER PRICE £97.00 PER CENT

PAYABLE AS FOLLOWS

Deposit with tender	£30.00 per cent
On Tuesday, 30th October 1979	Balance of purchase money

INTEREST PAYABLE HALF-YEARLY ON 22nd JANUARY AND 22nd JULY

This Stock is an investment falling within Part II of the First Schedule to the Trustee Investments Act 1961. Application has been made to the Council of The Stock Exchange for the Stock to be admitted to the Official List.

THE GOVERNOR AND COMPANY OF THE BANK OF ENGLAND are authorised to receive tenders for the above Stock.

The principal of and interest on the Stock will be a charge on the National Loans Fund, with recourse to the Consolidated Fund of the United Kingdom. If not previously redeemed, the Stock will be repaid at par on 22nd January 2002 but Her Majesty's Treasury reserve to themselves the right to redeem the Stock, in whole or in part, by drawings or otherwise, at par on or at any time after 22nd January 1999 on giving not less than three months' notice in the London Gazette.

The Stock will be registered at the Bank of England or at the Bank of Ireland, Belfast, and will be transferable, in multiples of one new penny, by instrument in writing in accordance with the Stock Transfer Act 1963. *Transfers will be free of stamp duty.*

Interest will be payable half-yearly on 22nd January and 22nd July. Income tax will be deducted from payments of more than £5 per annum. Interest warrants will be transmitted by post. The first payment will be made on 22nd January 1980 at the rate of £3.2466 per £100 of the Stock.

Tenders must be lodged not later than 10.00 a.m. on Wednesday, 12th September 1979 at the Bank of England, New Issues(X), Watling Street, London, EC4M 9AA or not later than 3.30 p.m. on Tuesday, 11th September 1979 at any of the Branches of the Bank of England or at the Glasgow Agency of the *Bank of England*. Each tender must be for one amount and at one price. The minimum price, below which tenders will not be accepted, is £97.00 per cent. Tenders must be made at the minimum price or at higher prices which are multiples of 25p. Tenders lodged without a price being stated will be deemed to have been made at the minimum price.

A separate cheque representing a deposit of £30.00 per cent of the nominal *amount tendered for* must accompany each tender; cheques must be drawn on a bank in, and be payable in, the United Kingdom, the Channel Islands or the Isle of Man. Tenders must be in sealed envelopes marked "Exchequer Tender."

Tenders must be for a minimum of £100 Stock and for multiples of Stock as follows:—

Amount of Stock tendered for	*Multiple*
£100-£2,000	£100
£2,000-£5,000	£500
£5,000-£20,000	£1,000
£20,000-£100,000	£5,000
£100,000 or greater	£10,000

Her Majesty's Treasury reserve the right to reject any tender or to allot a less amount than that tendered for. If undersubscribed, the Stock will be allotted at the minimum price, the balance of Stock not tendered for being allotted at the minimum price to the Governor and Company of the Bank of England, Issue Department. If oversubscribed, all allotments will be made at the lowest price at which any tender is accepted (the allotment price), and tenders at prices above the allotment price will be allotted in full.

Letters of allotment in respect of Stock allotted will be despatched by post at the risk of the tenderer. No allotment will be made for a less amount than £100 Stock. In the event of partial allotment, the balance of the amount paid as deposit will be refunded by cheque despatched by post at the risk of the tenderer; if no allotment is made the amount paid as deposit will be returned likewise. Payment in full may be made at any time after allotment but no discount will be allowed on such payment. Default in the payment of the balance of the purchase money by its due date will render the deposit liable to forfeiture and the allotment to cancellation.

Letters of allotment may be split into denominations of multiples of £100 on written request received by the Bank of England, New Issues, Watling Street, London, EC4M 9AA or by any of the Branches of the Bank of England, on any date not later than 26th October 1979. Such requests must be signed and must be accompanied by the letters of allotment.

Letters of allotment must be surrendered for registration, accompanied by a completed registration form, when the balance of the purchase money is paid, unless payment in full has been made before the due date, in which case they must be surrendered for registration not later than 30th October 1979.

A commission at the rate of 12½p per £100 of the Stock will be paid to bankers or stockbrokers on allotments made in respect of tenders bearing their stamp. However, no payment will be made where the banker or stockbroker would receive by way of commission a total of less than £1.

Until the close of business on 19th December 1979 Stock issued in accordance with this prospectus will be known as 12 per cent Exchequer Stock, 1999-2002 "A"; the last date for lodgment at the Bank of England of transfers of "A" Stock will [illegible] 1979. The interest due on 22nd January 1980 will be paid [illegible] on existing holdings of 12 per cent Exchequer Stock, 1999-2002 and on holdings of "A" Stock; consequently interest mandates or authorities for income tax exemption recorded in respect of existing holdings will not be applied to the payment of interest due on 22nd January 1980 on holdings of "A" Stock. From the opening of business on 20th December 1979 the "A" Stock will be amalgamated with the existing Stock.

Tender forms and copies of this prospectus may be obtained at the Bank of England, New Issues, Watling Street, London, EC4M 9AA, or at any of the Branches of the Bank of England, or at the Glasgow Agency of the Bank of England; at the Bank of Ireland, P.O. Box 13, Donegall Place, Belfast, BT1 5BX; at Mullens & Co., 15 Moorgate, London, EC2R 6AN; or at any office of The Stock Exchange in the United Kingdom.

BANK OF ENGLAND
LONDON
7th September 1979.

THIS FORM MAY BE USED

For use by Banker or Stockbroker claiming commission—	
(Stamp)	VAT Regn. No. (if not registered put "NONE")

This form must be lodged not later than 10.00 a.m. on Wednesday, 12th September 1979 at the Bank of England, New Issues(X), Watling Street, London, EC4M 9AA or not later than 3.30 p.m. on Tuesday, 11th September 1979 at any of the Branches of the Bank of England or at the Glasgow Agency of the Bank of England. *Tenders must be in sealed envelopes marked "Exchequer Tender."*

ISSUE BY TENDER OF £500,000,000

12 per cent Exchequer Stock, 1999-2002 **X**

MINIMUM TENDER PRICE £97.00 PER CENT

TO THE GOVERNOR AND COMPANY OF THE BANK OF ENGLAND

I/We tender in accordance with the terms of the prospectus dated 7th *September 1979 as follows:—*

Amount of above-mentioned Stock tendered for, being a minimum of £100 and in a multiple as follows:—

Amount of Stock tendered for	*Multiple*
£100-£2,000	£100
£2,000-£5,000	£500
£5,000-£20,000	£1,000
£20,000-£100,000	£5,000
£100,000 or greater	£10,000

say, ... pounds — AMOUNT OF STOCK £

Amount of deposit enclosed, being £30.00 per cent of the nominal amount of Stock tendered for:— AMOUNT OF DEPOSIT(a) £

The price tendered per £100 Stock, being a multiple of 25p and not less than the minimum tender price of £97.00:— TENDER PRICE(b) £ : p

say, ...

I/We hereby engage to pay the balance of the purchase money when it becomes due on any allotment that may be made in respect of this tender, as provided by the said prospectus.

I/We request that any letter of allotment in respect of Stock alloted to me/us be sent to me/us by post at my/our risk.

(c) I/We declare that the tenderer is not resident outside the Scheduled Territories(d) and that the security is not being acquired by the tenderer as the nominee of any person(s) resident outside those Territories.

September 1979   SIGNATURE

PLEASE USE BLOCK LETTERS   of, or on behalf of, tenderer

SURNAME OF TENDERER
MR/MRS/MISS OR TITLE ____________
FIRST NAME(S) IN FULL ____________
ADDRESS IN FULL ____________

a A separate cheque must accompany each tender. Cheques should be made payable to "Bank of England" and crossed "Exchequer Stock." Cheques *must be drawn on a bank in, and be payable in,* the United Kingdom, the Channel Islands or the Isle of Man.

b The price tendered must be a multiple of 25p and not less than the minimum tender price. If no price is stated, this tender will be deemed to have been made at the minimum tender price. Each tender must be for one amount and at one price.

c If this declaration cannot be made it should be deleted and reference should be made to an Authorised Depositary or, in the Republic of Ireland, an Approved Agent, through whom lodgment should be effected. Authorised Depositaries are listed in the Bank of England's Notice EC 1 and include most banks and stockbrokers and solicitors practising in the United Kingdom, the Channel Islands or the Isle of Man; Approved Agents in the Republic of *Ireland are defined in the Bank of England's Notice EC 10.*

d The Scheduled Territories at present comprise the United Kingdom, the Channel Islands, the Isle of Man, the Republic of Ireland and Gibraltar.

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FINANCIAL TIMES SURVEY
Monday September 10 1979

Saskatchewan

Economic prospects for Saskatchewan are extremely bright, with growth rates well above Canada's average. A sharp rise in living standards in recent years is founded on the province's uranium deposits, its grain harvests and world demand for potash. By taking an important stake in the development of its natural resources, Saskatchewan is doing its best to retain the benefits for the people who live there.

Bouncing back in the 1970s

By David Lascelles

WERE IT not for its eye-catching name (which is Indian for fast-flowing river) Saskatchewan might easily merge into the Canadian vastness as yet another flat grain-growing province. It has none of the oil glamour of Alberta, nor the political drama of Quebec. It has no famous cities like Toronto and Vancouver, and no well-known mountains, rivers or bays.

Yet, in its quiet way, Saskatchewan is politically one of the most unusual provinces in Canda, boasting some of the strongest socialist traditions in North America (it was first with a government health care system, as early as 1947, for instance). Economically its prospects are extremely bright, with growth rates well above the Canadian average. And while it may lag behind its western neighbour, Alberta, its economy is more diversified and its long-term prospects stronger.

As well as oil and gas, it has uranium, potash, metals and the largest steel mill in the north-west. Yet all this lumped together is still smaller than the agricultural sector, which produces more grain than any other province in Canada.

However, Saskatchewan's potential only began to emerge in the 1970s. As little as 10 years ago the province was going through the latest bust of the boom-and-bust cycle that has marked its fortunes since it was established in 1905.

The population, which had reached 950,000 in the mid-1960s, dipped into the 800,000s as workers streamed out in search of better times elsewhere. Even the bare Yukon held more appeal for some than Saskatchewan.

But the picture soon began to change as the 1960s gave way to the 1970s. Soaring energy prices, the discovery of vast deposits of uranium (albeit in the harsh and isolated north of the province), the strengthening of the world potash market, and the grain price boom: all combined to yank Saskatchewan forward again. And though there have been dips in the 1970s, the province is in infinitely better shape today than anyone would have dared to predict 10 years ago.

In four of the last five years, the real rate of growth in GDP has been more than 6 per cent. And although the Government is wary of making predictions because so much depends on the grain harvest, it says growth will be above the Canadian average for the foreseeable future, maybe 5-6 per cent a year.

For the people of the province, the boom has brought a sharp rise in living standards. Saskatchewan is now fourth in the Canadian wealth league, and rising. Towns like Regina (the capital) and Saskatoon further north are sprouting new buildings downtown, while suburbs of cosy modern homes sprawl outwards across the flat terrain. Out in the prairies, farmers live in well-equipped modern homesteads, and many manage to spend the quiet winter months away from the bitter cold in Hawaii, Arizona or the Caribbean.

Confidence

Not that Saskatchewan has become a social mecca. It bears many of the marks of a fast-moving economy: social dislocations and bottlenecks. It has also inherited a potentially serious race problem with the Indians and half-breeds who account for 10 per cent of the population. But it has a strikingly strong sense of direction, and there is more confidence now that the boom need not automatically give way to a bust.

A powerful guiding force over the last eight years has been the New Democratic Party government, which believes that it is not only able but has a duty to intervene strongly in the economy. In fact, the government's Crown Corporations now own nearly half of such vital industries as potash and play a big role in development of other resources.

The NDP was elected in 1971. But its socialist inclinations have their roots deep in Saskatchewan's history. And a knowledge of the province's early days is essential to understanding its politicis today.

Like most of the North American west, pioneering days were tough. But the unusual point about Saskatchewan is that its early settlers responded to the challenge by building up a strong co-operative movement. Quite why this should be is much debated, especially since things developed differently in other prairie provinces. But one reason could be Saskatchewan's relative isolation: it does not, like Manitoba, have access to Hudson Bay or Lake Superior, and it does not enjoy Alberta's proximity to British Columbia and the Pacific.

So its farmers were highly vulnerable to the dictates and wiles of the railways and grain traders. Early on, they decided to pool key resources like finance, transport and elevators (these grain collection and storage points at the railways play a key role in a prairie economy since they are where farmers deliver their grain and get their initial payment). Today, the Saskatchewan Wheat Pool is by far the largest co-operative in Canada, and the credit unions have combined assets of over C$2bn, accounting for 40 per cent of banking activity in the province.

The early co-operative spirit was hardened by the depression of the 1930s when drought and slump combined to push much of the farming population to the very brink of destitution. Today, older Saskatchewans say the suffering of that period was decisive in shaping the mood and character of the province.

The co-operative movement found its political expression in the Commonwealth Co-operative Federation, the party which ruled from 1944 to 1964 and established many of the welfare services the province enjoys today. The CCF lost out to the Liberals in 1964, mainly because its policies had lost their freshness. But in the succeeding years in opposition it underwent a rejuvenation, and re-emerged as the New Democratic Party to win again in 1971.

This return to power coincided with the revival of Saskatchewan's economic fortunes, and the new government wasted little time in tightening its control on the economy and enlarging the Crown Corporation's role in natural resource development.

Benefits

According to Mr. Allan Blakeney, Premier since 1971, his party was moved by two major concerns. One was the fact that few non-government corporations in the province were Saskatchewan-owned. So the province had little control over its industry, and had to put up with the fact that many large corporations operating in Saskatchewan had their headquarters, including marketing and R and D, elsewhere, often abroad.

The other concern was that Saskatchewan and its people should be assured the benefits of the resource boom. Last year, the government set up a Heritage Fund to receive at least 20 per cent of the revenues from non-renewable resources and plough them into developing a new "post-resource economy." As it turns out, a lot of the money has been ploughed straight back into non-renewable resources like potash and uranium (one of the arguments being that there is actually little else to devote it to). But funds have also been used to develop social services and build up the infrastructure. The Fund is expected to reach C$722m by the end of this year.

At first, the government tried to wrest a greater share of corporate profits by increasing taxation. But this ploy ran into a number of constitutional and other problems, and ended up with some companies flatly refusing to pay any tax at all. So the government decided to take the matter into its own hands and buy into industry itself.

The crunch came in potash where the NDP passed legislation enabling it to buy a large chunk of the industry from the operating companies. It was a critical moment, and it could have seriously damaged Saskatchewan's reputation as a place to do business. But in the end the government successfully negotiated the purchase of 40 per cent of the potash industry without too much rancour. (Many of the selling companies were probably glad of the chance to deploy their assets elsewhere.)

Although potash remains an extreme case, the government has passed other legislation which allows it to buy into the uranium and oil industries, and ensures it a major role in resource development generally.

Mr. Blakeney admits to some concern that his policies might seem anti-business, and that the province may have lost some investment as a result. But he comments that the limiting factor in Saskatchewan is not investment but managerial and marketing expertise, and these, he claims, are coming.

Despite his government's determined policies, Mr. Blakeney is a surprisingly low-key individual. A Nova Scotian by birth and a lawyer by profession, he originally came to Saskatchewan in 1950 as a legal adviser to the Crown Corporations. He held several ministerial posts in the CCF government, and was the party's financial affairs spokesman when it was in opposition. He emerged as the party's leader during its shake-up in 1970.

Allies

Today, he calls himself a Social Democrat and describes other leaders like Olof Palme, James Callaghan and Helmut Schmidt as "allies." But he still concedes that the notion of a social democrat in Saskatchewan is somewhat special, being based on local history rather than trade union traditions.

Alongside its resource programme, the NDP has striven to cut personal taxation (to the point, it claims, where the average family pays the lowest tax of any Canadian province) and hold down utility rates, while at the same time improving government benefits and services.

To some extent it has been able to bridge the widening gap between revenue and expenditure with corporate tax and royalties. But the budget has now been in deficit for four years in a row, and borrowings this year will be in the range of C$400m. The provincial debt has soared though Finance Ministry officials describe it as quite reasonable.

One of the NDP's tasks in the coming months will be to develop a working relationship with the new Conservative government in Ottawa. But Mr. Blakeney dismisses suggestions that there will be ideological conflicts. "Regional concerns are always greater than party concerns," he says. One is energy, where Saskatchewan is pressing for an energy security fund along the lines of that proposed by President Jimmy Carter for the U.S. (though the NDP claims to have thought of it first).

The fund would gather the windfall profits that the energy industry makes out of fast-rising energy prices and apply them to develop secure long-term energy sources.

These, and other long-standing issues of transport, taxation and the rights of provincial governments are bound to be raised in the coming months, though whether any of them are actually resolved is quite a different matter.

Underground riches fuel the economy

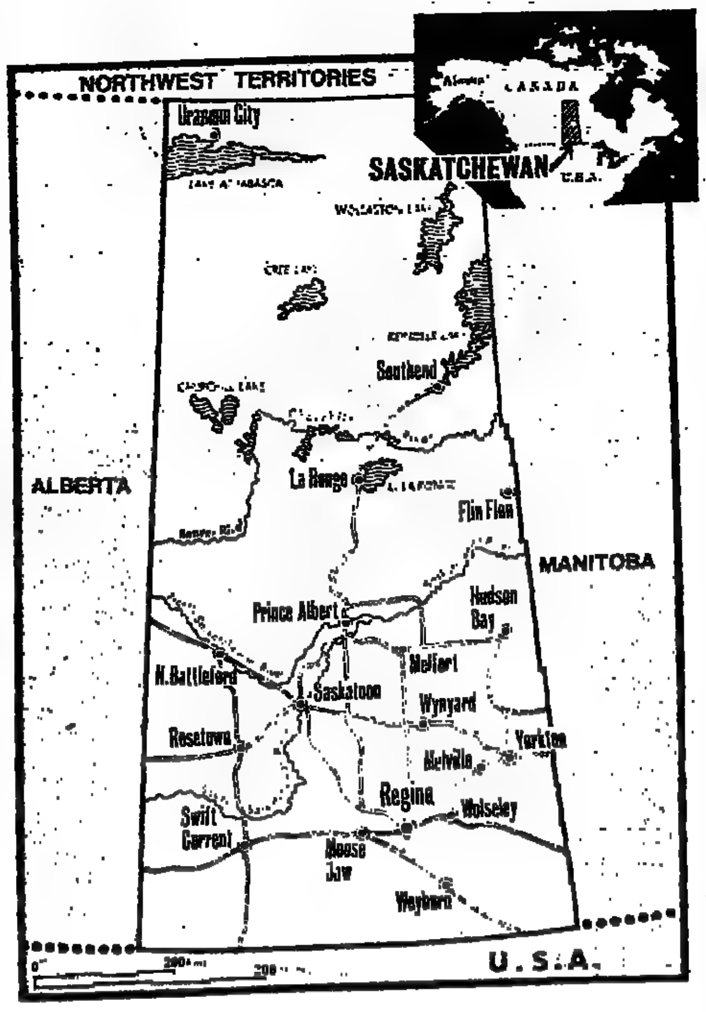
THE VAST pl... ... that once accounted for just about all of Saskatchewan's farming and fur trapping economy are fast giving way to new riches underground: metals, hydrocarbons, potash. Above ground, too, there are changes: a fledgling manufacturing industry has appeared, bringing with its elements of space age technology.

To some extent, all this is fortuitous. Without the energy crisis it is unlikely that uranium, oil and gas would have risen so quickly in importance. Other resources, like heavy oil, have only recently become economically and technologically viable. And the current rapid expansion of Saskatchewan's steel industry is directly linked to the discovery of oil and gas in Alberta and Alaska.

But the province also encourages these new trends since they fit into diversification policies aimed at reducing dependence on its traditional but highly volatile agriculture.

According to Mr. Allan Blakeney, the premier, the prime goal is stability—an end to the sharp ups and downs which rocked the province's economy in the past, breeding uncertainty and often despair.

The shift away from farming is already evident. As little as five years ago, agriculture accounted for 55 per cent of the value added in the province and mining and manufacturing combined only 30 per cent. Last year, agriculture was down to 40 per cent, and mining and manufacturing up to 38 per cent. And the government expects this trend to continue to the point where mining alone reaches 50 per cent, probably by the end of the 1980s.



Diversify

Up to a point, Saskatchewan is fortunate that the sharp mineral prices coincided with growth in world energy and its desire to diversify. It has therefore had little trouble attracting the necessary capital and expertise to open up its resources. Large concerns like Gulf Minerals, Uranerz, AMOK, Noranda, Husky Oil, Imperial Oil are all active in the province in a big way.

But the social democrat government in Regina is also promising diversification by actively influencing the course of such vital industries as potash, uranium and oil. The Crown corporations are now large shareholders in (or actual operators of) many natural resource projects, and this gives the government considerable control over economic trends. For instance, it owns 40 per cent of the province's potash production, and has the right to buy up to 50 per cent of any new uranium projects.

This intervention is being made partly out of the ideological conviction that the government should represent the people's interests directly, and ensure that the benefits accrue to the province and not solely to outside or foreign shareholders. But there are other reasons too.

The view is frequently expressed in Regina that private enterprise cannot be trusted to operate in the best interests of the province or nation. Nor does the Regina government have any doubts that the government is fully capable of running industry. "We can run Imperial Oil as well as Imperial Oil can," said one Cabinet member.

Mr. Jack Messer, the Natural Resources Minister who is most directly involved in the government's participation programme argues it on the grounds that resource development will proceed more smoothly: "When government and industry are in bed together, they get to understand each others' problems better. Mr. Messer also says that government participation is necessary to ensure that resource development is planned, and that supply is balanced with demand.

With memories of the oversupply crisis in the world potash market and the forced pro-rationing that followed still fresh in people's minds, "phased development" is a motion that has appeal in Saskatchewan, and few people argue that the price and market mechanism could do the job more efficiently.

Fortunately, the prospects for most of Saskatchewan's resources are currently so good that government's need to intervene in private industry has been small, one exception being the recent ruling that new uranium projects must have a 50 per cent Indian workforce. (The Interprovincial Pipe and Steel Corporation, the 20 per cent government-owned steel concern in Regina, described its relationship with the government as "excellent." Other companies used less glowing epithets, but none said life was impossible.)

The Crown Corporations also strive to (and mostly do) operate at a profit. Mr. David Dombowski, president of the Saskatchewan Potash Corporation, says: "We want to be thought of as a proper member of the mining industry."

Of the province's energy resources, conventional oil and gas have the most readily predictable future, though production is small and Saskatchewan has to bring in additional supplies. (Oil output in the province accounts for about 13 per cent of the Canadian total.)

Until recently, the prospects for uranium might also have been described as excellent. However, the nuclear accident at Three Mile Island in Pennsylvania has cast something of a shadow. Whether this will have any long-term effect remains to be seen. Saskatchewan believes not. Mr. Elwood Cowley, Minister for Economic Development, commented: "People will soon find that they cannot develop other sources of power quickly or cheaply enough."

The province's deposits of heavy oil are also due for exploitation once agreement can be reached on an upgrading plant. Potash is Saskatchewan's greatest single resource, with deposits which will last hundreds of years. Today, output accounts for about 38 per cent of the world total, and although prices have fluctuated sharply in the past, demand now outstrips supply to the point where Saskatchewan is more worried about an under- than an over-supplied market.

In manufacturing, the scene is dominated by IPSCO. The largest steel facility in the North West, it is in the process of being expanded to 750,000 tons and equipped to produce much of the 1.5m tons of large diameter steel pipe needed for the proposed Alaskan Highway pipeline which will bring North Slope gas through Canada and down to the U.S.

Other manufacturing activities include light agricultural machinery, chemicals and electronics. However, transport problems mean that Saskatchewan is not the ideal site for facilities that do not have to be there for specific reasons (like access to raw materials or appropriate markets), and the government does not expect growth in the manufacturing side to be as rapid as in resources.

Logical

The most logical developments would be in downstream processing of raw materials, although apart from oil refining, which is impractical because of cost, the opportunities must be deemed few. Little can be done to potash; uranium upgrading and enrichment is fraught with problems. But agricultural processing would be possible. Other manufacturing opportunities might lie in servicing the booming energy industry in Alberta.

But however fast manufacturing and mining grow, agriculture will still be dominant for years to come. Mr. Edward K. Turner, president of the Wheat Pool, commented: "We still have tremendous agricultural potential, and we're only just beginning to realise it."

This sector is also in the process of being diversified. New crops like rapeseed and peas have been introduced to reduce dependence on grain and give the soil a change (salinity is a growing problem). Livestock production is also being encouraged: beef and pork.

But the prospects for grain are so good that the government recently "adjusted" its diversification programme to sustain this crop at the highest possible levels. The Canadian Wheat Board has estimated that Canada could sell 50 per cent more wheat than it does, and evidently Saskatchewan, as Canada's largest grain-grower and exporter, would have a big contribution to make.

The biggest problem, though, is transport. With freight rates frozen at uneconomic levels, the railways have been reluctant to expand and improve their facilities. So the Saskatchewan government has offered to finance the purchase of several thousand hopper cars and back the appointment of a federal transport co-ordinator to maximise use of the existing system. These proposals are currently under consideration in Ottawa.

David Lascelles

Growing confidence in potash industry

AFTER A decade of difficulties, the Saskatchewan potash industry appears ready to fulfil the promises made for it by its early promoters. The current thinking among provincial government officials is that the world fertiliser cycle has turned in the province's favour and that the industry will have double its capacity in the 1980s to keep pace with the growth in world demand.

For an industry that entered the 1970s operating at less than half capacity such a fundamental turnround would normally presage growing confidence and buoyancy. But the optimism is not shared equally by all producers in the province. The Potash Corp. of Saskatchewan, the provincial crown corporation that purchased 40 per cent of the industry's capacity between 1976 and 1978 is considering a number of ambitious projects, including one that would cost nearly $400m, which would increase its capacity by about 45 per cent. The private mine owners, who found themselves threatened with expropriation when they crossed the government's path in the mid-1970s, have been more cautious, although province's Mines Minister Mr. John Messer says he expects the private industry will soon approach the Government with expansion plans.

Provincial officials base their expansion plans on a belief that the potash business is entering a golden era, a view they hold in common with the late premier of Saskatchewan, Mr. Ross Thatcher, whose Government's enthusiasm in giving away mining development permits in the 1960s was largely responsible for this decade's troubles. What officials argue now is that, while Mr. Thatcher and his Government were right in feeling that the inexorable pressure of population growth on food supplies guaranteed an ever-growing market for potash, he was wrong in his timing. What was missed in

Knowledge

The 1960s, they say, is that of the three main fertiliser elements — nitrogen, phosphorus and potash—the potash market was the slowest to take off. Of the three, the effects of nitrogen are the most dramatic, even in the eyes of a farmer with no scientific knowledge. The addition of nitrogen means plants are greener and grow faster. While less dramatic, the effects of phosphorus are visible as well. The plant is healthier looking and seed size is increased. But, while potash is essential for healthy plant growth, its effects are less visible. It is essential for good flower colour and ripeness in fruits, stiffens the straw of cereals, promotes root development and enables the plant to withstand adverse conditions of soil, climate and disease.

These characteristics have meant that agricultural scientists and extension workers, particularly in Third World countries, have had less success in convincing farmers to use more potash than they have with nitrogen and phosphorus.

But during the 1980s potash will take a growing share of the fertiliser market, officials feel. Rising energy costs are driving up the price of nitrogen, and phosphates will rise in price as the world turns to lower grade reserves. This will force farmers to use a higher proportion of potash in their fertiliser blends as it is needed to ensure the maximum effectiveness of the other ingredients in the fertiliser mixture.

There are already signs that Saskatchewan, which has an estimated 14bn tons of mineable reserves—a 2,000 year supply at current mining rates—may reasonably expect strong market growth in the 1980s. In the fertiliser year ended June 30, Canpotex, the overseas marketing company for Saskatchewan's potash producers, had export sales (not including sales to the United States) of just over 3m tonnes, almost —600,000 tons higher than a year earlier a nd 400,000 tons higher than the previous record of 1974-75. In the North American market, where potash use is better established, the market is estimated at 7.6m tons, up only 1 per cent.

The largest sales increases in 1978-79 were in the Chinese and Brazilian markets, the two areas that offered the greatest opportunities for future growth. Mr. Roger Hatch, president of Canpotex, feels "China is just starting to apply modern agricultural techniques in order to obtain improved yields, which will require substantial increases in fertiliser application in the coming years. In Brazil, the area under cultivation is being expanded at a rapid rate and production of crops such as soyabeans, which require heavy application of potash, is increasing rapidly."

Mr. M. A. Upham, president of International Minerals and Chemicals Corporation (Canada), expects that world demand will rise by almost 10m tonnes to 33.8m tonnes by 1987, compared with 24m tonnes in

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Getting the grain to market

ALTHOUGH DRY conditions will reduce Saskatchewan's harvest this autumn, the talk when farmers gather in cafes in dusty prairie towns is more likely to be of box cars and rail lines than of drought and hail. Canada's grain transportation system is so badly in need of an overhaul that Saskatchewan's farmers do not need to worry about growing a bumper crop. Even if the world market could take the grain, it could not be exported.

Nowhere else in the Canadian west is grain transportation quite as crucial as it is in Saskatchewan. More than the other prairie provinces, Saskatchewan still depends on grain. To the east, Manitoba is more urban, its economy more diversified and its agriculture spread over more lines. To the west, Alberta is using its petroleum wealth in a way that gives it the fastest growing provincial economy in Canada. While, to be fair, Saskatchewan has mineral and energy resources that hold out the promise of healthy growth, these are for the future. The short-term economic performance of the province is shaped by agriculture with farm cash income the key determinant for any number of variables from consumer spending to provincial tax take.

Market conditions have improved this year — the Canadian Wheat Board has been asking record prices of over $6 for a bushel of top grade wheat this summer—and the livestock market has also been encouraged by higher prices for beef. As a result, the province's farmers are expected to net at least as much as they did last year.

While the strong farm income picture may be some consolation to the province's farmers, the frustration with their situation comes from knowing that, at a time when world grain markets seem set for a prolonged upswing, they will not be able to market all the grain they could grow or sell. In the crop year ended July 31, Canadian grain exports of 18.9m tonnes were down by 2m tonnes from a year earlier. And just over 20m tonnes seems to be the upper limit to what the system can handle if it runs perfectly.

Harvesting in Saskatchewan

But while every farm leader or provincial politician puts grain transportation at the head of a list of Saskatchewan's problems, they are proving to be extremely difficult to resolve. The basic dimensions of the problem have been well documented over the past decade by any number of industry committees and government investigations. The system was built before World War I when the Canadian West was opened to a flood of migrants from Eastern Canada and Europe. Settlement followed the railroad, and thousands of miles of branch lines were laid across the prairies to take the wheat to market. Along those rail lines, tall grain elevators, perhaps the most uniquely Canadian of any architectural form, were built to take the grain to market.

Outmoded

That system, where distances between rail lines and grain elevators were determined by how far a farmer with a team of horses and a wagon could haul grain, is now outmoded. Its deficiencies became all too clear in the 1970s when, under the twin pressures of rising costs, particularly for energy and labour, and soaring demand for grain, it proved incapable of carrying to market all the grain that Canada could have exported. The problems come at three main points in the system. At the terminal shipping points, Canada has not built enough grain elevator capacity to handle the surges in export demand that can develop through market conditions or ocean shipping patterns. The railways have let their rail car fleet run down and have failed to repair little used branch lines. And in the country, elevator companies, whose profits have been limited by low, government-regulated handling charges, have been reluctant to invest heavily in better facilities that would increase the productivity of elevator operators. Overlying these economic and business problems is a thick layer of political and social issues that makes improvement of the system much more difficult than if it were simply to be reshaped by market forces.

If market forces were fully felt, transport and handling charges would rise to levels that would fully cover costs at each point in the system and would also generate the investment needed to upgrade and increase the system's capacity. At the same time, inefficient parts of the system would be weeded out as too costly.

But transport charges for grain moving to export positions has been frozen since early in the century and, as a consequence, the railways have been reluctant to make the necessary investment in equipment and repairs to keep the system at peak efficiency. The federal government has had to offer subsidies to keep branch lines open, to repair road beds and, when these proved to be inadequate, purchased thousands of rail cars for grain shipping. A federal commissioner estimated that in 1977 the two major railways in Canada, the Canadian National and the Canadian Pacific, were $175m short of breaking even on grain transport, even after $650m in branch line subsidies.

Furthermore, the flow of grain through the system, right down to the control of farmer deliveries to his country elevator, is tightly regulated by the Canadian Wheat Board, a federal agency that has wide support among producers. Solutions are further complicated by mixed public and private control of the system's facilities. One of the two railways, Canadian National is publicly owned, and the largest part of the elevator system is controlled by farmer-owned co-operatives.

These factors make any change in the system a matter of intense and often bitter political debate. Farmers are reluctant to bear additional costs to see control of any portion of the system slip from public or co-operative hands to the grasp of large-scale private companies. Provincial politicians point to the social costs that will be borne by communities that lose their grain elevator, an argument which has great emotional weight but one which ignores the restructuring of the social fabric of the Prairies resulting from the construction of good, all-weather roads.

Choose

In the end, the federal Government will have to choose between nationalising the system, which would allow costs to be buried in the public accounts, or allowing market forces to have a greater role in shaping it than they do now. The now-defeated liberal government, under the leadership of then Transport Minister Otto Lang had proposed that the systems charges be set by the market with a subsidy payment that would have effectively given farmers their historical transport rates, paid directly to them.

Just what the new conservative government will do to solve grain transport problems is not yet clear, although it seems determined to speed up the proposed construction of a new export terminal at the port of Prince Rupert in British Columbia. And Mr. Lang's proposal for dealing with the freight rate problem seems to be catching on. It has the support of all western Canadian provinces except Saskatchewan. Although the province has no direct jurisdiction over the grain handling system, it does control the roads in the province and it has been reluctant to make any road improvements that would support changes it disagreed with. In a cabinet shuffle earlier this summer, Mr. Gordon MacMurchy, a minister with a reputation for tangling with the federal Government, was appointed provincial Minister of Agriculture.

While Saskatchewan's proposals for improving the transport system have all called for increased federal Government subsidies, the province, with its heavy emphasis on more public sector involvement, may be fighting a losing battle. Mr. Lang and the liberal government of which he was a minister were widely disliked and distrusted.

The results of the federal election changed the political equation. With a conservative Government installed in Ottawa and with the province flanked by two provincial conservative governments at a time when governments seem ready to take action to change the system Saskatchewan has been isolated. It will be able to protest change but not to block it. Furthermore there is growing realisation among farmers that they will have to pay a larger share of the grain transport bill—they paid only about a third in 1977 according to a Royal Commission estimate—and this summer the last government hopper car purchase is being financed directly out of the farmers' pockets.

Jim Rusk

BASIC STATISTICS

		Trade with rest of Canada and abroad (1978)	
Area	251,700 square miles	Exports	C$4.19bn
Population	947,000	Grain	C$1.71bn
Unemployment	4.9 per cent	Oil	C$787m
GDP (1978)	C$9.77bn	Potash	C$496m
Per capita	C$10,216	Imports	C$4.17bn

Potash

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1977. "Canada's relatively good location for serving markets in Asia, Oceania and much of Latin America, combined with its large reserves and efficient production operations, should enable it to maintain and strengthen its position as the world's largest potash exporter."

With the expansion in demand, inventories were run off in the last year and prices strengthened. In the current year, prices are expected to average $10 a ton higher than the $77-$78 a ton they averaged in the last fertilizer year, and production is expected to increase by 4 to 5 per cent over last year's 7m tons.

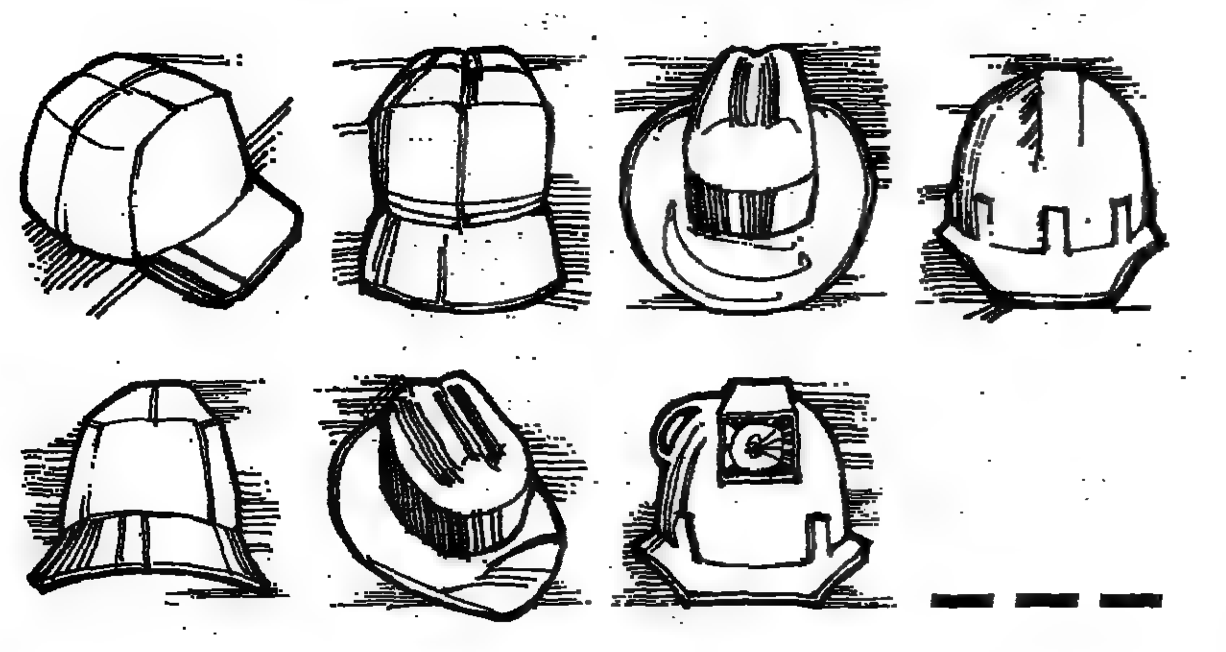
In the short run, most of the industry's expansion to meet this growing demand will be done by the provincial Potash Corporation. The province's goal is to own 50 per cent of the productive capacity in Saskatchewan, and since it plans no more mine acquisitions, this target will be achieved through expansion of the provincial Potash Corporation. The Corporation will have about 44 per cent of the province's capacity in 1981 when it completes the first phase of expansion at the mines it has acquired. In most cases, these have simply been an upgrading of the current equipment to bring the mines to nameplate capacity. It will spend $16.2m in phase one expansion this year. It will also spend $17.2m of a $73m phase two expansion that will raise the capacity of its Raconville mine to 2m tonnes a year from 1.4m tonnes.

Mr. Messer says the province will welcome expension plans from the private companies although they will have to compete with those of the Crown Corporation and the target of 50 per cent provincial ownership. One reason for his optimism that the private companies will come through with mine expansion is that the 10-year battle between the provincial government and the industry over taxation and production control, which culminated in the takeover of capacity by the province, finally appears to be winding down. Agreements have been concluded with the companies covering new taxation methods which will replace the current potash reserve tax with a taxation system tied to actual mine production and potash prices. The production tax will be $6-$7.50 a tonne and a profit tax of 10 to 50 per cent, depending on profit levels, will be imposed on an individual mine's net profits. The scheme, which went into effect at the start of the fertilizer year, calls for the mining companies to abandon any legal actions they may have against the provincial government.

The legal battles date back to 1973 when the companies attacked provincial resources taxation methods, which the companies said forced them to operate in the red. In the fall of 1978, the Supreme Court of Canada overthrew as unconstitutional the potash prorationing scheme which had been implemented by the former Thatcher government. Under the scheme, production was limited and minimum prices set in order to counter over-production in the industry, which had sent prices tumbling.

It was the persistent efforts by the companies to have the courts overthrow provincial taxes on the industry that provoked the provincial government to take over a portion of the industry's capacity.

Jim Rusk



More efforts to boost tourism

THE POPULAR conception of Saskatchewan landscape is bald prairie vanishing into the horizon, dotted by grain elevators and tied together by a hop-scotch pattern of rail lines. In fact Saskatchewan is best known in the world community for the precisely-timed horsemanship of its scarlet coated "Mounties."

The plains have certainly dominated the image of the "Bread basket of the World." But pine forests and hundreds of clear lakes cover nearly half of this vast province. In the south, Duck Mountain, Cypress Hills or Moose Mountains' spring-fed lakes provide tree-shaded refuge from the plains. Outlaw cave hideouts and Indian spiritual sites are part of spectacular geological oddities in the Badlands skirting the American border. Northern fly-in fish camps have long attracted American anglers.

There is no fuel shortage in this oil producing province, and excellent roads have eased access to sites out in northern forests. But it has its problems too: "non-winterised" park resorts, poor air connections internationally, and high air fares on domestic routes.

Development

In many ways, Saskatchewan's tourist industry is going through growing pains associated with a rapidly transformed agrarian economy. In the last 10 years, the province's rural population has been cut by over half and rapid urbanisation has taken place. This has resulted in a greater demand by urban residents for recreation.

Facilities for summer activities are particularly strained during July's peak vacation time, while winter recreation demands have grown dramatically as more people try to keep active and beat the February blues. The immediate task facing Tourism Department officials and tourist organisations is to meet those increased demands and by doing so to keep dollars inside Saskatchewan.

The task is by no means small. The 17 provincial parks alone cover 1,925 square miles. Then there is one national park located north of Prince Albert and within a year, North America's first Grasslands National Park will see prairie bison put back in their natural habitat. Numerous small privately owned summer and winter resorts have been established in almost every area of the province, and provincial officials are talking about grants or tax incentives to encourage further development of those resorts.

The province's two major cities, Regina and Saskatoon, offer an increasing variety of nightclubs, restaurants, museums, art galleries and historical points of interest. For real western excitement, a professional rodeo circuit brings bare-back bull riding to a string of country towns in summer. Even when the rodeo isn't on, it is not uncommon to see men and women attired in cowboy boots, hats and blue jeans walking down main street.

Skiing has become the major winter sport, beating ice skating and curling. Ski runs have been built across the province for downhillers, while just outside Saskatoon is Blackstrap Mountain, a man-made earth ski hill. Cross-country skiing offers many trails as well as the chance to strike out into bush country.

But despite all its attractions, Saskatchewan still loses $170m a year. A close examination of the figures shows that while Saskatchewan residents spend almost 150m outside Canada, only $2[illegible] comes back in from visitors. With a fair number of America and international residents heading to sunnier southern beaches to get away from the cold winter, Saskatchewan's tourist industry has a serious problem.

Canoeing on the Reindeer River in northern Saskatchewan

In a land which experiences dry snow for at least six months in the year, this predominately one season operation of provincially-owned facilities has at last been recognised as significant under-utilisation of costly capital facilities. The Tourism and Renewable Resources Department will soon release an interdepartmental study, which will focus on what private and public upgrading of facilities is needed to turn current provincial parks into winter playgrounds. The key question is likely to be how to finance such a massive "winterisation" needed for days when the thermometer dips below —30C.

Another problem is being met head on: staff turnover has always been high. Training carried out at provincial technical institutes, but many hotel and motel owners do not like to spend on training people who may not stay. What the province has done is put the training on wheels.

"Accent on Hospitality" is a two-pronged programme designed to raise the level of service and increase the tourist industry's self-respect. A specially constructed trailer travels the province with two instructors. Inside is a miniature hotel. A check-out counter, dining table, bar and bedroom suite are used for practical training sessions fitted into the hotel's schedule. Such small things as the proper glass to serve wine with are taught along with setting-up a menu. The trailer has been enthusiastically endorsed by hotel and motel operators and is booked solid until next March.

Tourism Development Director Roger Franklin hopes Accent On Hospitality will encourage people to consider tourism as a life-time occupation instead of a summer job.

The real tourism growth area for Saskatchewan is escorted Franklin. With increasing fuel tour buses according to Mr. costs, single vehicle travel will decline, but tour bus traffic is up 25 per cent this year and Mr. Franklin expects its to keep on climbing. The type of bus traveller is changing too as more younger families use this form of travel.

Escorted tours have a big advantage from the resort or hotel operator's point of view too. The tours can be scheduled to arrive during off-peak days, and increasing American-originated tours to fill those slack times is on the province's priority list.

Saskatchewan is effectively cut off from international tourist traffic by not having an international airport. Federal customs facilities will receive temporary upgrading by November to handle winter charter flights. An air link with Denver, Colorado, may be put in service next spring, but the only hope for international designation now rests with Air Canada's fight to retain landing rights at Heathrow Airport.

Facilities

Saskatchewan is not included in present bilateral air agreements as a point of origin for international flights. With British Airways wanting access to western Canada, officials hope one Saskatchewan site may be included as part of a compromise agreement.

Saskatoon would be a logical choice. The new airport has the necessary facilities and Saskatoon is already a gateway for the north. A connection with Edmonton or Winnipeg makes geographical sense.

By October, preliminary findings of the task force study should have placed some dollar figures on upgrading tourist facilities. With any luck, money will be allocated in the 1980-81 budget to start "winterizing" and building new facilities.

The next few years will tell how successful Saskatchewan is at keeping its people at home. If it does, then attention will turn to attracting more offshore tourists. An international airport will bean essential starting point.

Donald Humphries

Big interest in heavy oil

FUTURE HOPES for Canadian energy self sufficiency are centred not on conventional oil reserves, but on tar sands, and heavy oil. All along Saskatchewan's western border are located heavy oil pools that have generated much excitement in the past two years. Conservative estimates place reserves at 4.5bn barrels, while Imperial Oil estimates total potential reserves at 23.1bn barrels.

To find out just how much is there, drilling activity in heavy oilfields continues at a hectic pace, and oil lease sales continue to set record per acre prices for prime locations. Pilot enhanced recovery plants aided by government grants are testing the new technology necessary to make heavy oil extraction economically viable.

Approximately $10m from the Canada-Saskatchewan Heavy Oil Agreement has been spent so far. A call for proposals to spend the remaining $8m will be issued by the Mineral Resources Department before December.

Although department officials say no decision on the type of projects has been taken, no one will be surprised if research on new technology needed to build smaller heavy oil upgrading plants will be included.

Heavy oil presents a double sticky problem. Due to its extreme thickness or viscosity, heavy oil is difficult to pump to the surface. Using conventional oil recovery systems, companies have only been able to bring between 1 and 10 per cent up the well.

Enhanced recovery plants now in operation are using a variety of techniques including steam, controlled combustion and solvents to bring more oil up. Industry spokesmen hope the new pilot plants will result in recovery rates ranging from 25 to 40 per cent.

If sufficient amounts of heavy oil can be brought up, the remaining big question is refining. Canada does not have a heavy oil upgrader, without which heavy oil can only be used for asphalt and heavy bunker oil. An upgrader is in simple terms a special refinery which chemically changes heavy oil into light crude. The light crude can then be used by any of the many western Canadian refineries.

A breakthrough in upgrader technology could result in smaller 10,000 barrel per day (b/d) to 30,000 b/d upgraders being built instead of 120,000 b/d plants.

The advantages to Saskatchewan of such plants are many: there would be several plants instead of one; the plants could be located close to major oilfields pipelines; and perhaps most important, the capital investment would not be too onerous. From a supply point of view, smaller refineries could be built even with existing production.

The attention now, however, is being given to finding recovery techniques that will turn pilot plants into commercial ones.

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SASKATCHEWAN V

New mines feed the uranium boom

THE BUZZ of helicopters above northern pine forests heralds the biggest exploration rush Western Canada has seen for years. The reason is the high-grade uranium deposits found in the 27,750 sq mile Athabasca Standstone Basin, stretching along the top of Saskatchewan.

Only bare slivers of the largely unexplored Basin have not yet been claimed, and there are an estimated 200 exploration outfits at work there. Last year, when the rush was still building up, over half of all hard rock drilling activity in Canada took place in northern Saskatchewan.

This is the third uranium exploration boom in northern Saskatchewan since 1950. The first took place in hard rock along the northern shore of Lake Athabasca around Uranium City. The second started in 1968 after Gulf Minerals announced a major find at Rabbit Lake.

The current rush started building up about three years ago, but did not reach its full momentum until last winter, following a positive finding by a judicial inquiry into the whole question of uranium development in the province.

The one-year inquiry headed by Appeals Court Judge Edward Bayda was basically concerned with a proposed open-pit mine project at Cluff Lake by AMOK, the French mining consortium. It gave the green light in June 1978 and the rush started as soon as the provincial regulatory proceedings had been cleared.

But the Bayda inquiry also considered the question of provincial-federal jurisdictions over uranium mining; and while calling on both sides to settle their disputes, it recommended to the province that it assert its authority if agreement could not be reached.

The New Democratic Party (NDP) proceeded to do just that. It immediately entered into surface lease negotiations with AMOK, and is insisting on conditions much stricter than any existing federal legislation. AMOK must hire at least 50 per cent northern native workers and use them in positions throughout the mine-mill operations. There are conditions on buying supplies and equipment from Saskatchewan businesses. AMOK will set up natives in business and provide on-the-job management training.

Employees may not be shifted out of "hot spots" to lower their average radiation reading. The work area must be radioactively clean enough for work to go on all year round. Internal and external exposure levels are combined for the first time in Canada. Environmental standards have not yet been set, but officials say all tailing ponds will have impervious linings.

AMOK is a French consortium composed of three private companies and one State corporation. Compagnie de Mokta holds a 25 per cent share, Compagnie Francaise des Minerais d'Uranium 20 per cent, Pechiney-Ugine Kuhlman 25 per cent and Commissariat a l'Energie Atomique 30 per cent.

Reserves

The lease gives AMOK access to proven reserves of 50m lb of uranium at Cluff Lake. The ore-body is the first to be mined and has an incredible 10 per cent uranium content. AMOK managing director Marcel Tabouret is confident that as yet undiscovered high grade deposits are nearby.

AMOK agreed in late July to sell 20 per cent of its present and future Cluff Lake discoveries to the Crown-owned Saskatchewan Mining Development Corporation. The $66.9m sale price gave AMOK an immediate C$26.9m surplus this year.

When Cluff Lake's mill starts producing next year, its refined uranium ore is already earmarked for delivery to France and West Germany. After 1984 most of the 4m lb produced every year will go to France.

In fact all of Saskatchewan's uranium will end up on the world market. Canadian needs are taken care of by long-term contracts already concluded between Ontario Mines and Ontario Hydro, the major nuclear facility.

Other exploration areas in the Athabasca Sandstone Basin are as follows:

PNC Exploration (Canada) holds an exploration permit on 192,000 acres (300 square miles). PNC is owned by Japan's Power Reactor and Nuclear Fuel Co.

AGIP Canada holds three permits for 516,116 acres. AGIP is a subsidiary of Italy's Atomic Energy Commission.

SERU Nuclearie (Canada) has moved its exploration emphasis from Quebec to Saskatchewan. This subsidiary of France's Atomic Research Agency holds six permits for 847,472 acres.

ESSO Minerals owns a 50 per cent share of the rich Mid-West Lake strike worth at least 97m lb of refined ore.

The most unusual permit holder is the Red Earth Indian Band. This native group has 5,850 acres under permit.

The next major proven find to go through the regulartory approval hearings is Uranerz's Key Lake project, estimated to contain over 100m lb of uranium oxide. Uranerz Exploration and Mining is a wholly owned subsidiary of Uranerzbergbau GmbH of Bonn, West Germany. Uranerz is one of four uranium mining corporations whose head offices are located in Saskatoon. (The others are AMOK, SMDC, and Key Lake Mining Co.)

Uranerz is also a charter member of the "Big Three"—Uranerz, SMDC and Eldor Resources. The Big Three are partners in Key Lake with exploration of 122,424 acres) in proportions of: SMDC (50 per cent), Uranerz (one-third) and Eldor (one-sixth).

Eldor Resources is a subsidiary of federally-owned Eldorado Nuclear. Eldorado's Uranium City Beaverlodge mine-mill is being expanded to 1.8m lbs a year from 1.4m. Eldorado also hopes to reopen the Dubyna mine with reserves of 500,000 lb.

Eldorado has just released its Environmental Impact Study as the first move towards environmental hearings on a proposed $100m uranium refinery. Eldorado wants to build the plant at Warman, a small town 18 miles north-east of Saskatoon. The strong Mennonite local farming community is divided over the project. Groups opposing and supporting the refinery are continuing to hold meetings in the area.

But the real power in uranium activity is the Crown-owned Saskatchewan Mining Development Corporation (SMDC). SMDC has legislated power to take a 50 per cent interest in any uranium find. Currently it has interests in 202 exploration ventures covered by 140 agreements.

The only major find in which SMDC does not have an interest is Esso's Mid-West Lake. But David Francis, SMDC Executive Vice-President, says some preliminary acquisition discussions have taken place. SMDC is acting as an arm of the NDP government in uranium mining just as the Potash Corporation of Saskatchewan did in potash.

Provincial Secretary Elwood Cowley, the man who engineered the potash take-over, is now Minister responsible for SMDC. SMDC's President Roy Lloyd moved out of Premier Allan Blakeney's office last March where he had been Chief Planning Officer. Mr. Lloyd was also responsible for the Provincial Energy Secretariat and had presented the Province's brief to Judge Bayda's Cluff Lake Inquiry.

The province is using the Heritage Fund to finance SMDC exploration and development. But any further acquisition of properties like the 20 per cent AMOK interest will be financed through borrowing on the Canadian and international money markets.

The reason given for the AMOK acquisition was to secure supply in case Key Lake does not come on stream in 1984. It will also provide a quicker source of cash.

Challenge

If Key Lake is delayed, it could be because of a recent challenge mounted by local environmental groups. But unlike U.S. anti-nuclear groups, those in Saskatchewan do not have much public impact. This could change if the price of uranium starts to fall and the boom grinds to a halt, though it would take extreme conditions to produce a major change in public opinion.

Some officials say the market will be glutted if more than two new mines (Key Lake and Mid-West Lake) come on stream. Marcel Tabouret thinks a three to four per cent decrease in price will take place between 1983-86, but that prices will rise again after 1986.

But Saskatchewan uranium can still be profitable at around $10 a pound. With that cushion in mind, the Province will encourage new mines to open and keep investing money in exploration to feed the boom. With virtually no geological information available on the vast Athabasca Sandstone Basin, provincial officials are quietly hoping that the present uranium rush will stumble across other valuable minerals so as to broaden still more Saskatchewan's rich resource base.

Donald Humphries

Heavy oil

CONTINUED FROM PREVIOUS PAGE

Husky Oil is the major heavy oil player. The company is in the first of a five year $450m programme aimed at doubling production from its Lloydminster holdings. Husky will spend $61.4m on capital projects this year. This includes detailed engineering work on a heavy oil upgrader and $10.9m on further enhanced recovery pilot plants.

Husky is undertaking this programme without any government grants. Mr. Robert Blair, president of Alberta Gas Trunk Line (AGTL) which now owns a controlling interest in Husky, says the company is studying four different possible sizes of upgrader, ranging from 50,000 b/d to 120,000 b/d. Mr. Blair says he did not want to commit his company to any particular size right now, but his personal feeling is that smaller upgrader have more overall advantages. He also reaffirmed that Husky's first upgrader will be built on the Saskatchewan side of the Lloydminster heavy oil pool.

An increasingly active participant is Saskatchewan Oil and Gas Co. (SaskOil). The crown corporation has teamed up with PetroCan and Gulf Canada to explore 500,000 acres. The agreement calls for information sharing and building of an upgrader should sufficient supply be found. SaskOil is also watching the federal Government's deliberation overt he possible sale of PetroCan. Should the government put PetroCan on the block, SaskOil would not mind grabbing a few choice chunks.

Once exploration is over and a field like Macklin, 90 km south of Lloydminster, has been discovered, the emphasis turns to extraction. Murphy Oil Co. and Canadian Reserve Oil and Gas Co., both of Calgary, provide a good example of the complex nature of enhanced recovery plants.

Murphy Oil is supervising the $8.5m plant located in the Eyehill oil pool near the town of Macklin. Each of 25 new wells being drilled will be connected to the plant and storage tanks by three sets of underground insulated pipe. Over 100,000 feet of pipe will be laid this summer. The site will be divided into nine squares, with wells placed at each corner and in the centre. Compressed air will be injected into the oil-bearing formation through the centre or injection well. A controlled burning will then be started by lowering an electric heater down the well.

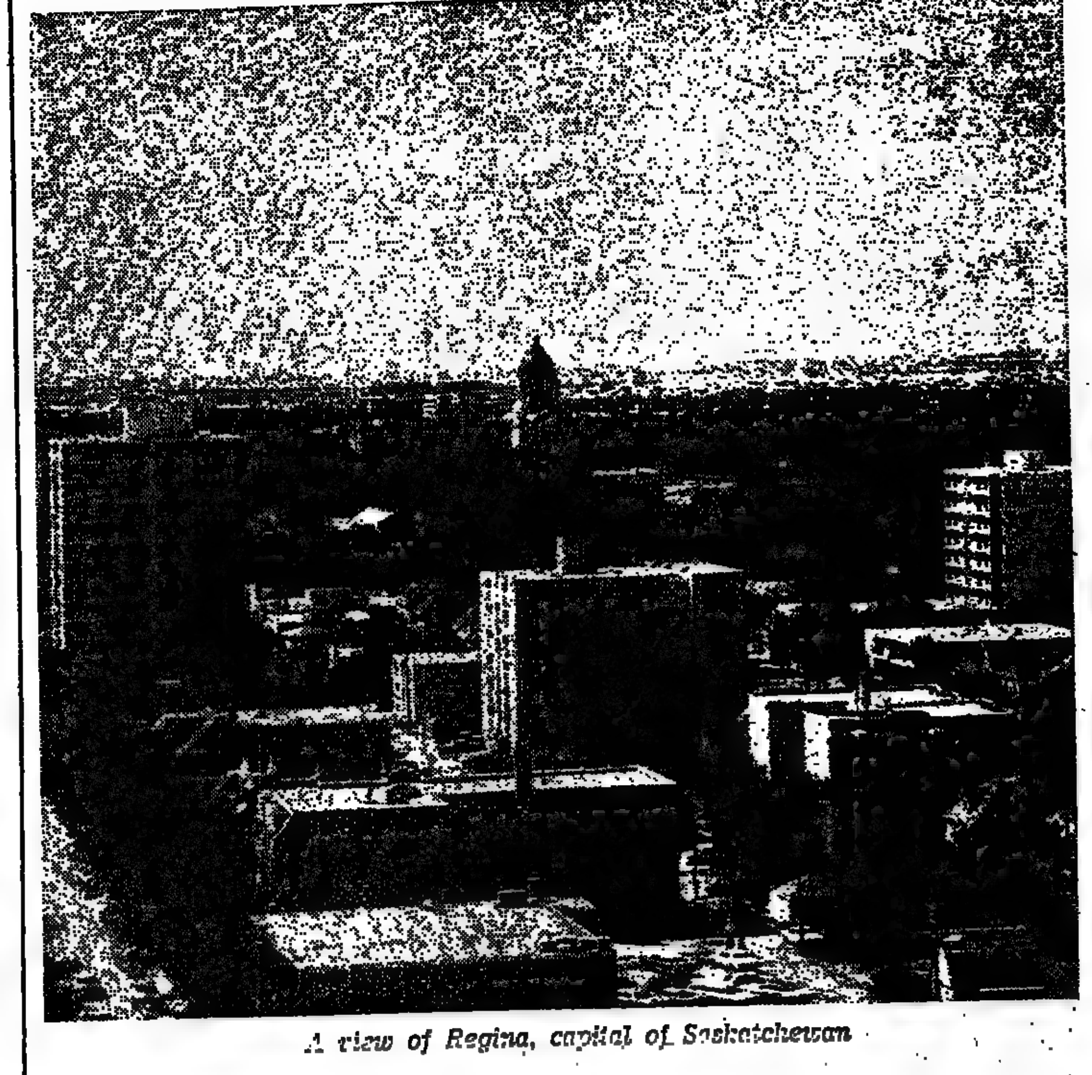
Water present in the formation will turn to steam, adding pressure which will push thinning oil from the ever-expanding fire towards the corner producing wells. Steam will be injected down corner producing wells to clear out wax and hydrocarbon build-ups. The steam will also thin out heavy oil in the immediate vicinity, which will be pumped up. Once the oil is pumped out, it will be stored in 15,000-gallon storage tanks. The oil will be moved to Unity, Saskatchewan, to hook up with Murphy's Lloydminster - Kerrobert pipeline. The heavy oil will then be transported via Interprovincial Pipeline to Montreal, Quebec and Superior, Wisconsin.

But even if one method works well at one location in a field, there is no guarantee it will work in the rest of the field. There is also a serious problem of sand coming up with the thinned out oil and causing equipment breakdowns.

But that problem may soon be solved. In fact, Texas Gulf thinks it has got the answer at its Meota pilot plant. The company is keeping silent on the technique, but Texas Gulf uses only steam to thin heavy oil.

The next two years should tell how effective this new technology is. But for the industry as a whole, enhanced recovery plants seem to be the only way to extract significant amounts of oil.

D.H.



A view of Regina, capital of Saskatchewan

A rodeo in progress at Maple Creek

Small towns and big spaces

HUGE SKIES, rolling cornfields, a flat horizon broken only by a knoll or clump of trees, clusters of angular elevators at some distant railway siding. These are the traditional images of Saskatchewan, Canada's largest grain-growing province.

But today, there are competing images too: the desolate north with its rolling fir forests and still lakes scarred by new uranium mines; four-lane highways cutting across the plains, modern office blocks in the towns. Each year, the human imprint grows.

Saskatchewan is very much a man-made province, despite the vast emptiness of much of its territory. It was only systematically settled in the last 100 years. Yet the southern, agricultural, half is highly developed and organised.

A traveller can drive for hours through its prairies, past such colourful-sounding places as Moose Jaw, Swift Current and Indian Head. But he is never out of sight of farmstead or a village. Scarcely a square foot of land is not put to good use. Road and telephone communications are excellent, and the people alert and informed. (They have to be; Saskatchewan depends on outside markets for most of its agricultural and commodity sales).

Further north come the so-called Park Lands, a region of accessible forests and lakes, part cultivated, part set aside for recreation. Here too, despite the seemingly endless territory at Canada's disposal, things are tightly organised. Camping, fishing and boating are controlled, and the visitor would find it hard to get lost or feel isolated.

It is only in the north, where the roads stop and the sub-arctic forests begin that Saskatchewan becomes truly wild. Yet even here, things are changing. The first road serving a northern uranium mine at Rabbit Lake has opened up whole new areas in the north east. Other roads are also being built or planned to connect up flourishing settlements. Adventurous fishermen can even charter seaplanes to fly in to "recognised" campsites on remote lakes for what is reputed to be some of the best fresh water fishing in the world.

But despite these developments, farming is still what Saskatchewan is really all about. The average Saskatchewan farmer runs 1,000 acres single-handed or with the help of his son. Most likely, he inherited the land from his forebears who were granted it free or at nominal cost during the early settlement drive. But increasingly, new people are coming on to the land, drawn by the healthy and relatively prosperous life it offers. For them, entry into the business is more difficult. Farmland prices have soared in recent years, so have equipment costs. And today's young farmers start out with a heavy burden of debt.

But farming is about the only trade that is attracting young people. Elsewhere, Saskatchewan is still losing its young to more glamorous provinces like Alberta and Ontario. The average age of its people is high by Canadian standards: over 10 per cent of them are "senior citizens."

Goal

This is a worry for the government, which has launched job creation programmes to stem the flow, or to encourage young men to enter farming by making special finance available. The preservation of a strong farming community in a social as well as an economic sense is an important goal. As one government official put it: "We want to maintain the small town atmosphere in the prairies."

Although old hands say farming has changed beyond recognition in the last 15 years to the point where it can actually be comfortable and prosperous, it is still a demanding life. Summers are hot (over 30 degrees C) and unpredictable, making things tricky for grain-growers. Winters, on the other hand, are bitter, with temperatures dipping as low as minus 40 degrees C, bringing strong winds and driving snow.

No self-respecting Saskatchewan motorist takes his car out of town in winter without a good set of digging-out equipment, food, blankets, and a heat source such as a candle. Many cars also have two-way radios.

Saskatchewan's earliest settlers were the French and British, who arrived mainly as fur traders in the 18th and early 19th centuries. But in the second half of the last century, after the Canadian Pacific railroad had been built and the native uprisings crushed, the land was thrown open to mass immigration.

Many of the new arrivals were East Europeans and Ukrainians for whom the flat steppe-like land with its hard winters must have seemed familiar. Today, the Slav imprint is still strong. Russian orthodox churches with their shining onion towers dot the countryside. In the towns, street signs denote the origins of their proprietors: The Dniepr restaurant, the Kiev motel.

But the fundamentals are unmistakably British. Regina, the capital, is named after Queen Victoria, and the town's two main streets are called Albert and Victoria. The three flagpoles above the majestic provincial legislature carry the Saskatchewan and Canadian flags and the Union Jack.

Saskatchewan does have a festering social problem though: the Indians and half-breeds (or Metis, as they are called), which between them number about 100,000 or one tenth of the provincial population.

Both these social groups have low standards of living and high crime and mortality rates. A recent study by the federal government on the Indian problem concluded: "If racial turmoil does occur in Canada, it is likely to begin in Saskatchewan and spread to other areas." The report recommended political and educational reforms to head off this threat.

The report was widely disputed at the time and is now played down in Regina. But the government there is nevertheless conducting a study of its own which is likely to recommend specific educational and employment programmes. A major concern is the fact that 52 per cent of the Indian population is under 16.

The Indian problem has its roots in the treaties signed by the tribes in the last century with Queen Victoria. Under their terms, the Indians (who were mainly Crees) ceded many of their land and property rights in exchange for reservations, certain privileges (like exemption from taxation) and government services (protection, medicine, etc.).

Rights

However, the Federation of Saskatchewan Indians claims today that the treaties have been wrongly interpreted, and that the Indians have a more fundamental right to nationhood than the Canadian Government allows them. They also claim rights over natural resources, the province's major growth area. But these rights have never been fully clarified in the courts.

"It's a question of taking a wholly new approach," said their leader Mr. Solomon Sanderson, who recently travelled to London to petition the Queen directly. (He did not get into Buckingham Palace, but was received at the Foreign Office.)

However, the Indians do at least have treaty status. The problem is in many ways more acute with the Metis and non-status Indians. Their position is unclear since they have neither reservations nor treaty rights to fall back on.

There is also a strong tradition of militancy among the Metis, whose ancestors mounted a serious challenge to the Federal Government in the 1880s, culminating in the bloody battle of Batoche in central Saskatchewan in 1885. That encounter is still commemorated with an annual Metis get-together close to the battle site; the church and rectory where the Metis put up their last stand are now a museum.

Today, thousands of Indians and Metis mingle with the white community. In Regina, it is quite common to see Indians with feathered hats, long black plaits and distinctive dress walking through the streets. Some Indians have even risen to high positions in their respective fields.

But the majority live on reservations where job opportunities are few and where the cultural division between Indian and white only aggravates the existing problems of drink, violence and illiteracy.

The provincial government says the Indian question is basically an economic one, and is now pushing jobs for Indians. For exampe, all new uranium projects in the north must now employ 50 per cent "local inhabitants." Gulf Minierals, operators of the Rabbit Lake mine, took on Indians voluntarily before this rule was introduced, and was able to train some of them up to foreman level.

However, solution of the Indian problem is ultimately the Federal Government's responsibility, and there is a limit to what Saskatchewan can do.

With the economy picking up, employment increasing and the long-term prospects improving, Saskatchewan's main hope is that its fortunes will stabilise, that young people will stay and that new businesses and skills will arrive. The biggest obstacles are transport and, curiously enough, image.

Saskatchewan's huge distance from Canadian and U.S. business centres makes freight transport tricky, though passenger transport is extremely good thanks to Air Canada.

As for image, Saskatchewan is fixed in many people's minds as a prairie province with little to excite the imagination. Increasingly, this is no longer true as modern resource industries become more established there. But there is even a danger that the new "boom economy" image could bring problems, particularly if Saskatchewan is lumped together with Alberta, its infinitely richer neighbour to the west, and viewed as another golden egg-laying goose.

For the coming years, that will not be the case. Saskatchewan's Heritage Fund is only one tenth of the size of Alberta's and its oil potential is considerably smaller. And though it views its prospects with much optimism, it likes to think of them in terms of steady, long-term growth rather than a dramatic burst based on a single resource.

D.L.

هكذا من الأصل

AUTHORISED UNIT TRUSTS

Abbey Unit Tst. Mngrs. (a)
72-80, Gatehouse Rd., Aylesbury. 0296 5941

Abbey Gilt Int. Tst.	107.7	113.4	—	3.13
Abbey Capital	37.8	40.2	—	4.74
Abbey Income	44.5	47.3	—	7.40
Abbey Inv. Tst. Fd.	37.9	39.9	—	5.71
Abbey Gen. Tst.	49.9	53.1	−0.1	4.59
Equitas Prog. Tst.	70.0	73.9	—	4.78

Allen Harvey & Ross Unit Tst. Mngrs.
45, Cornhill, London EC3V 3PB. 01-623 6314.

AHR Gilt & Pref.	97.4	102.5xd	—	12.00

Allied Hambro Group (a)(g)
Hambro Hse., Hutton, Brentwood, Essex.
01-588 2851 or Brentwood (0277) 211459

Balanced Funds				
Allied 1st	72.6	77.7xd	—	5.35
Brit. Inds. Fund	70.8	75.8	−0.1	5.34
Grth. & Inc.	41.0	43.4	—	5.07
Elect. & Ind. Dev.	38.7	41.4	+0.1	5.07
Allied Capital	76.9	82.3	—	4.86
Hambro Fund	119.0	127.3	—	4.52
Hambro Acc. Fd.	139.2	148.9	—	5.88
Income Funds				
High Yield Fd.	72.9	78.0xd	−0.1	8.77
High Income	69.7	74.6xd	—	7.51
A. H. Eq. Inc.	41.4	44.3xd	−0.1	7.31
International Funds				
International	25.8	27.6	+0.1	2.91
Pacific Fund	37.3	39.9	+0.1	2.23
Secs. Of America	57.2	61.2	+0.4	2.06
Specialist Funds				
Smaller Co.'s Fd.	47.9	51.2	+0.1	3.91
2nd Smlr. Co's Fd.	58.3	62.4xd	—	4.01
Recovery Sits.	114.7	122.7	+0.1	5.47
Met. Min. & C'dty.	47.5	50.8	−0.1	5.12
Overseas Earnings	58.0	62.1	+0.1	5.31
Exempt Funds⊕				
Far East Exempt	44.9	46.7	+0.1	3.01
Smaller Co. Exempt	74.9	78.6	—	4.38
U.S.A. Exempt	98.9	102.9xd	+0.6	3.40

Anderson Unit Trust Managers Ltd.
156, Fenchurch St., EC3M 6AA. 623 9231

Anderson U.T.	55.8	60.2	—	4.20

Ansbacher Unit Mgmt. Co. Ltd.
1, Noble St., EC2V 7JA. 01-623 6376

Inc. Monthly Fund	165.8	175.0xd	—	10.00

Arbuthnot Securities Ltd. (a)(c)
37, Queen St., London, EC4R 1BY. 01-236 5281.

High Yield	44.8	48.0xd	—	10.80
(Accum. Units)	70.2	76.4	—	10.80
Extra Income Fd.	103.8	112.9	—	10.29
(Accum. Units)	109.9	117.3	—	10.29
High Inc. Fund	40.8	44.4xd	+0.1	8.59
⊕(Accum. Units)	61.1	66.5xd	+0.2	8.59
(8½% W'drwl. Uts.)	53.9	58.6xd	+0.1	8.59
Preference Fund	24.5	24.7	+0.1	12.40
(Accum. Units)	41.5	45.1	+0.1	12.40
Capital Fund†	22.4	24.1	—	—
Commodity Fund	66.8	72.1	—	4.14
(Accum. Units)	99.3	107.2	—	4.20
(10% W'drwl. U.)	55.1	59.1	—	4.20

Friends' Provdt. Unit Tr. Mgrs.♥
Pixham End, Dorking. 0306 5055

Friends Prov. Uts.	49.7	53.1	−0.1	4.60
Do. Accum.	66.6	71.2	−0.1	4.60

Funds in Court*
Public Trustee, Kingsway, WC2. 01-405 4300

Capital Aug. 30	107.7	108.8	—	4.96
Gross Inc. Aug. 30	76.9	78.7	—	9.91
High Yield Aug. 30	84.7	87.2xd	—	9.68

*Unauth. Restricted to monies under Court control.

G.T. Unit Managers Ltd.♥
16 Finsbury Circus, EC2M 7DD 01-628 8131

G.T. Cap. Inc.	105.6	112.3	+0.1	4.10
Do. Acc.	131.2	139.5	+0.1	4.10
G.T. Inc. Fd. Un.	168.3	179.0xd	+0.1	9.10
G.T. U.S. & Gen.	136.4	145.1	−3.2	2.80
G.T. Japan & Gen.	79.9	84.5	−0.5	3.10
⊕Gt. Pens. Ex. Fd.	223.2	234.3	—	5.30
G.T. Int'l. Fund	153.7	163.5xd	−0.3	3.10
G.T. Four Yds. Fd.	53.8	57.2	—	7.80
G.T. Far East & Gen.	45.1	48.4	+0.1	3.40

G. & A. Trust (a) (g)
5 Rayleigh Road, Brentwood. (0277) 227300

G. & A.	36.4	38.9	—	4.96

Gartmore Fund Managers♥ (a)(g)
2 St. Mary Axe, EC3A 8BP 01-623 6114
Dealing only: 01-623 5766/5806

American Tst.	25.4	27.3	—	0.92
British Tst. (Acc.)	65.7	70.7xd	—	3.12
Commodity Share	30.8	33.1	−0.2	3.02
Extra Income Tst.	24.7	26.6	—	9.28
Far East Trust	31.4	33.6	−0.3	0.14
High Income Tst.	58.8	63.3xd	+0.1	9.37
Income Fund	76.9	82.7xd	+0.1	7.35
Ins. Agencies	£14.31	15.30	−0.02	4.16
Intl. Exempt Fd.	95.1	102.5	+0.1	6.64
Intl. Tst. (Acc.)	31.6	34.0	+0.3	0.96

Gibbs (Antony) Unit Tst. Mgs. Ltd. (a)
3 Frederick's Pl., Old Jewry, EC2 01-588 4111

Extra Income	30.1	32.8xd	—	9.40
Income	43.1	46.9	—	8.80
Accumulation	78.1	84.9	−0.2	4.00
Growth	42.9	46.7	+0.3	4.45
Capital	47.1	51.2	—	3.40
Small Co's	48.4	52.6	+0.2	4.00
Technology	71.0	77.2	+0.4	4.50
Private	46.0	50.0xd	—	4.30
Intl. Erns. & Assets	47.3	51.5	—	4.30
American	24.7	26.9	—	2.00
Far East & Gen.	24.6	26.5xd	—	2.20
Far East Trust	27.7	29.8xd	—	2.20

Govett (John)♥
77 London Wall, EC2 01-588 5620

Stockhldr. Aug. 31	128.8	135.9	—	3.07
Do. Accum. Unit	157.6	166.1	—	3.07

Next dealing August 31.

Grieveson Management Co. Ltd.
59 Gresham Street, EC2P 2DS 01-606 4433

Barrington Sept. 5	241.7	252.6	—	5.60
(Accum. Units)	273.2	285.5	—	5.60
Bing. H. Yd. Aug. 30	177.8	184.2	—	9.48
(Accum. Units)	221.3	231.8	—	9.48

INSURANCE & PROPERTY BONDS

OFFSHORE & O'SEAS FUNDS

Alexander Fund
37, rue Notre-Dame, Luxembourg.

Alexander Fund		US$5.60	—	—

Net asset value September 4.

Allen Harvey & Ross Inv. Mgt. (C.I.)
1 Charing Cross, St. Helier, Jsy., C.I. 0534-73741

AHR Gilt Edg. Fd.	[illegible]	12.14xd	—	11.76

Arbuthnot Securities (C.I.) Limited
P.O. Box 284, St. Helier, Jersey. 0534 76077

Cap. Tst. (Jersey)	125.0	129.0	—	7.75

Next dealing Sept. 17.

Gov't Secs. Tst.	[illegible]	[illegible]	—	−1.0

Next dealing date September 18.

East & Intl. Tst. (C.I.)	104	111	—	3.38

Next dealing September 20.

Australian Selection Fund NV
Market Opportunities, c/o Irish Young & Outhwaite, 127 Kent St., Sydney

US$1 Shares		$US1.48	—	—

Net asset value November 24.

Bank of America International S.A.
35 Boulevard Royal, Luxembourg G.D.

Wildinvest Income	[illegible]	109.64	—	8.44

Prices at Aug. 30. Next sub. day September 5.

Banque Bruxelles Lambert
2, Rue De la Regence B 1000 Brussels

Renta Fund	59.99	61.83	+0.15	8.17

Barbican Managers (Jersey) Ltd.
P.O. Box 63, St. Helier, Jersey 0534 74806

Barb. Int. Fund	89.6	94.7	—	5.00

Barclays Unicorn International
1, Charing Cross, St. Helier, Jersey. 0534 73741

Keyser Ullmann Ltd.
25, Milk Street, EC2V 8JE. 01-606 7070

Fonselex	F1,383	1,514	—	3.30
Bondselex	F118.15	124.15	—	2.40
Central Assets	£150.57	150.63	+0.05	—

King & Shaxson Mngrs.
1, Charing Cross, St. Helier, Jersey. (0534) 73741
Valley Hse., St. Peter Port, Gnsy. (0481) 24706
1 Thomas Street, Douglas, I.O.M. (0624) 4856

Gilt Fund (Jersey)	9.69	9.74xd	—	11.75
Gilt Trust (I.o.M.)	105.5	108.9	—	11.75
Gilt Fnd. Guernsey	10.05	10.10	—	11.75
Intl. Govt. Secs. Tst.				
First Sterling	£21.56	21.71	—	—
First Intl.	[illegible]	238.25	—	—

Kleinwort Benson Limited
20, Fenchurch St., EC3. 01-623 8000

Eurinvest		LF1,147	+2	4.25
Guernsey Inc.	68.3	72.5	—	4.73
Do. Accum.	86.9	92.1	—	4.73
KB Far East Fd.		$US13.06	—	2.16
KB Gilt Fund	£10.90	10.96xd	−0.6	11.47
KB Intl. Bd. Fd. Inc.		$US103.29	—	8.29
KB Intl. Bd. Fd. Acc.		$US108.94	—	—
KB Intl. Fund		$US13.35	−0.13	2.11
KB Japan Fund		$US32.31	—	0.93
K.B. U.S. Gnth. Fd.		$US25.15	—	2.44
Signet Bermuda		US$5.68	—	1.78

Lloyds Bk. (C.I.) U/T Mgrs.
P.O. Box 195, St. Helier, Jersey. 0534 27561

Lloyds Tst. O'seas	54.4	57.3	—	2.73

Next dealing September 17.

Lloyds Trust Gilt	£10.19	10.29	—	11.50

Next dealing September 12.

Lloyds Bank International, Geneva
P.O. Box 438, 1211 Geneve 11 (Switzerland)

FT SHARE INFORMATION SERVICE

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"Shorts" (Lives up to Five Years)

[illegible]

Five to Fifteen Years

[illegible]

Over Fifteen Years

[illegible]

Undated

[illegible]

INTERNATIONAL BANK

[illegible]

CORPORATION LOANS

[illegible]

COMMONWEALTH & AFRICAN LOANS

[illegible]

LOANS

Public Board and Ind.

[illegible]

Financial

[illegible]

FOREIGN BONDS & RAILS

[illegible]

U.S. $ & DM prices exclude inv. $ premium

AMERICANS

[illegible]

CANADIANS

[illegible]

BANKS AND HIRE PURCHASE

[illegible]

BANKS & HP—Continued

[illegible]

Hire Purchase, etc.

[illegible]

BEERS, WINES AND SPIRITS

[illegible]

BUILDING INDUSTRY, TIMBER AND ROADS

[illegible]

CHEMICALS, PLASTICS

[illegible]

CHEMICALS, PLASTICS—Cont.

[illegible]

DRAPERY AND STORES

[illegible]

ELECTRICALS

[illegible]

ENGINEERING MACHINE TOOLS

[illegible]

ENGINEERING—Continued

[illegible]

FOOD, GROCERIES, ETC.

[illegible]

FOOD, GROCERIES—Cont.

[illegible]

HOTELS AND CATERERS

[illegible]

INDUSTRIALS (Miscel.)

[illegible]

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AUSTRALIAN

Dividends Paid		Stock	Price	Last xd	Div Net	C'vr	Y'ld Gr's
—		Acmex	12	—	—	—	—
—		ACM 20c	14	—	—	—	—
—		Bond Corp.	61	—	—	—	—
Nov.	Apr.	Bougainville 50 Toea	134	14.3	†Q15c	1.8	5.9
—		BH South 50c	138	974	—	—	—
—		Central Pacific	770	—	—	—	—
Oct.	May	Conzinc Riotinto 50c	215	14.5	NQ10c	2.0	2.4
—		Cultus Pacific N.L.	22	—	—	—	—
—		Eagle Corp. 10c	17½	—	—	—	—
—		Endeavour 20c	17½	—	—	—	—
—		G.M. Kalgoorlie $1	105	6.67	Q3c	♦	1.5

TINS

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MISCELLANEOUS

GOLDS EX-$ PREMIUM

London quotations for selected South African gold mining shares in U.S. currency excluding the investment dollar premium. These prices are available only to non-UK residents.

Feb.	Aug.	Buffels R1	$18⅝	2.1	Q200c	♦	13.0
Aug.	Feb.	East Drie R1	$14	2.7	†Q175c	1.6	9.9
Aug.	Feb.	East Rand Prp. R1	$10	2.7	†Q10c	—	1.2
June	Dec.	F.S. Geduld 50c	$30¼	30.10	†Q315c	2.4	12.6
June	Dec.	Pres. Brand 50c	$21½	30.10	†Q150c	3.2	8.4
May	Nov.	St. Helena R1	$19¼	26.3	†Q190c	1.6	12.0
Aug.	Feb.	Stilfontein 50c	740c	2.1	†Q66c	1.7	10.8
Aug.	Feb.	Vaal Reefs 50c	$35	29.1	†Q280c	2.7	10.1
Feb.	Aug.	West Drie R1	$49½	2.7	Q615c	♦	15.0
June	Dec.	West Hldgs. 50c	$37½	2.5	†Q415c	1.6	13.4
Feb.	Aug.	Western Deep R2	$17⅝	29.1	†Q147½c	2.1	10.1

NOTES

Unless otherwise indicated, prices and net dividends are in pence and denominations are 25p. Estimated price/earnings ratios and covers are based on latest annual reports and accounts and, where possible, are updated on half-yearly figures. P/Es are calculated on the basis of net distribution; bracketed figures indicate 10 per cent. or more difference if calculated on "nil" distribution. Covers are based on "maximum" distribution. Yields are based on middle prices, are gross, adjusted to ACT of 30 per cent. and allow for value of declared distributions and rights. Securities with denominations other than sterling or in EEC currencies are quoted inclusive of the investment dollar premium.

- Δ Sterling denominated securities which include investment dollar premium.
- ● "Tap" Stock.
- * Highs and Lows marked thus have been adjusted to allow for rights issues for cash.
- † Interim since increased or resumed.
- ‡ Interim since reduced, passed or deferred.
- ‡‡ Tax-free to non-residents on application.
- ♦ Figures or report awaited.
- †† Unlisted security.
- ¢ Price at time of suspension.
- ¶ Indicated dividend after pending scrip and/or rights issue: cover relates to previous dividends or forecasts.
- ♦ Merger bid or reorganisation in progress.
- ♣ Not comparable.
- ♦ Same interim: reduced final and/or reduced earnings indicated.
- § Forecast dividend: cover on earnings updated by latest interim statement.
- ‡ Cover allows for conversion of shares not now ranking for dividends or ranking only for restricted dividend.
- ★ Cover does not allow for shares which may also rank for dividend at a future date. No P/E ratio usually provided.
- ♥ Excluding a final dividend declaration.
- ✝ Regional price.
- ‖ No par value.

a Tax free. b Figures based on prospectus or other official estimate. c Cents. d Dividend rate paid or payable on part of capital; cover based on dividend on full capital. e Redemption yield. f Flat yield. g Assumed dividend and yield. h Assumed dividend and yield after scrip issue. j Payment from capital sources. k Kenya. m Interim higher than previous total. n Rights issue pending. q Earnings based on preliminary figures. s Dividend and yield exclude a special payment. t Indicated dividend: cover relates to previous dividend, P/E ratio based on latest annual earnings. u Forecast dividend: cover based on previous year's earnings. v Tax free up to 30p in the £. w Yield allows for currency clause. y Dividend and yield based on merger terms. z Dividend and yield include a special payment: Cover does not apply to special payment. A Net dividend and yield. B Preference dividend passed or deferred C Canadian. E Minimum tender price. F Dividend and yield based on prospectus or other official estimates for 1979-80. G Assumed dividend and yield after pending scrip and/or rights issue. H Dividend and yield based on prospectus or other official estimates for 1978-79. K Figures based on prospectus or other official estimates for 1978. M Dividend and yield based on prospectus or other official estimates for 1978. N Dividend and yield based on prospectus or other official estimates for 1979. P Figures based on prospectus or other official estimates for 1978-79. Q Gross. T Figures assumed. Z Dividend total to date. §§ Yield based on assumption Treasury Bill Rate stays unchanged until maturity of stock.

Abbreviations: xd ex dividend; xc ex scrip issue; xr ex rights; xa ex all; xd ex capital distribution.

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FINANCIAL TIMES

Monday September 10 1979

Engineers face more serious losses

By Alan Pike, Labour Correspondent

THE ENGINEERING industry faces another week of serious production losses with a second two-day strike over the national pay dispute due to begin this morning.

Companies are being encouraged by the Engineering Employers' Federation to keep their factories open today in the hope that an increasing number of employees will become disenchanted by the industrial action and report for work. But union leaders remain confident that—as last week—the vast majority of their members will heed the strike call.

If, as the unions expect, support for the action remains high today, the industry faces serious problems following the breakdown of exploratory peace talks on Friday.

An increasing number of employers is likely to start questioning whether, with the combined effect of weekly two-day strikes and a national overtime ban which is also in force, it is worth opening factories for the rest of the week. The unions have warned that any company which lays off workers because of the dispute will be considered to have locked them out.

At Rolls Royce, 30,000 manual workers, who have been told they will be laid off from Friday if the dispute is not settled by then, have also been warned that pay increases in the coming round can come only from improved productivity.

They are told in the current issue of the company newspaper that forthcoming wage negotiations are possibly the most important Rolls Royce has held. They would decide whether the 1980s was a period of unparallelled prosperity for the company and its workforce, or one of stagnation and decline.

Leaders of both the EEF and the Confederation of Shipbuilding and Engineering Unions will be reviewing the position when they have seen the level of support for today's strike. The action is over a claim for a new minimum national craft rate of £80 per week, a one-hour reduction in the working week this year, extra holidays and a common implementation date for the new agreement.

Two attempts to achieve a settlement to the dispute—one at the Advisory, Conciliation and Arbitration Service, and the second at Friday's talks in Manchester—have failed to make progress.

The employers indicated on Friday that they were prepared to improve their pay offer this week—so far they have offered to increase the craft rate from £60 to £70—if the unions called off the industrial action, which they were not willing to do.

Even if this obstacle could have been overcome the two sides would have remained divided over the claim for an immediate hour off the working week.

MP urges ban on polyurethane

AN MP has called for an immediate ban on furniture containing polyurethane, blamed at the recent inquest on the F. W. Woolworth fire in which 10 people died, for causing the rapid spread of flames.

Mr. Ron Brown, Labour Member for Hackney South and Shoreditch, said: "The crucial question that should have been asked at this inquest was, 'would there have been the same disaster if there had been no polyurethane in the furniture?'"

Continued from Page 1

Thatcher

renewal order could not be steered through Parliament again, but there is little doubt that, if it were presented as a temporary renewal pending a settlement, it could be forced through.

The Labour and Liberal parties would back renewal, so would virtually all the "payroll" vote of 100 Ministers. Even if the Lords threatened to defeat the Order, Mrs. Thatcher could probably persuade them, with the help of Lord Carrington, to reconsider their attitude.

But the cost in party terms would be considerable. Many more than the 116 Tory MPs who fought renewal last year when the Conservative Opposition advised abstention, would oppose the Order. They would come from a wide spectrum of the party.

A powerful argument would be that, having recommended abstention last year, it would not be logical to expect the party to back continued sanctions this year after the Rhodesia elections and the setting up of the Muzorewa Government.

Callaghan attacks BNOC sale plan

BY PHILIP RAWSTORNE

MR. JAMES CALLAGHAN last night issued an angry warning to Mrs. Margaret Thatcher over the Government's proposals to sell part of the British National Oil Corporation's North Sea oil and gas holdings.

"Such a decision would be totally against the national interest which lies in owning and exploiting the one secure source of oil this country possesses," Mr. Callaghan declared.

In a letter to the Prime Minister, he said: "I must warn you that such a decision would become a major issue between us, going far beyond the normal divisions between Government and Opposition."

Mr. Callaghan's vigorous protest was delivered against a background of growing differences between Cabinet Ministers over the disposal of some BNOC assets.

A Government decision is expected this week on whether the corporation will be forced to sell some of its holdings to raise the £400m contribution that Sir Geoffrey Howe, the Chancellor, is seeking to reduce the public sector borrowing requirement.

The corporation has suggested five possible ways of raising the money:

- Transferring its interest in the Viking gas field to British Gas in exchange for its offshore oil interests in the Beryl, Fulmar and Montrose fields which could then be sold.
- Issuing of low-denomination bonds linked to the price of oil and secured by BNOC assets.
- Advancing sales of the corporation's own crude oil production.
- Advancing sales of the oil taken by the Government in lieu of royalty payments; or
- Issuing public shares in BNOC.

Mr. David Howell, Energy Secretary, is reported to be reluctant to order any direct sale of BNOC assets, such as its interest in the Statfjord field.

But Labour leaders, who discussed the question at a meeting last week of the Shadow Cabinet, believe that Treasury pressures combined with the determined denationalisation policies of Mrs. Thatcher and Sir Keith Joseph could force his hand.

The corporation's proposals for share or bond issues, it is suggested, could take too long to implement to meet the Treasury timetable.

Labour shadow Ministers would probably accept, if reluctantly, BNOC's own proposal of a deal with British Gas.

But Mr. Callaghan stressed last night: "To dispose, or lose control, of part of our national resources would be to sell the seed corn of the future."

Through BNOC, the British Government had control of a source of oil and gas that put the country in a stronger position economically than any other major industrial nation, he said. The assets, whose disposal was now under discussion, would be producing substantial quantities of oil as well as revenue for the counry beyond the end of the century.

Mr. Callaghan told the Prime Minister that if BNOC were forced into selling its assets, there would be the gravest risk it would not obtain the full value for them since there could be no qustion of allowing them to be bought by overseas companies.

The corporation had been established as the direct result of a parliamentary inquiry, Mr. Callaghan asserted.

"I shall be grateful for your assurance that the present discussions will not lead to the disposal of any North Sea oil field or part of it . . . . and that you will ensure that the fullest control and ownership of these natural resources will be protected by the Government."

British oil companies' supplies had recently been affected by decisions of foreign governments and many overseas interests would like to call our present position in question, he said.

"This is no time for us to weaken in any way the strength of our supply position."

GATT blames outdated economics for inflation

BY BRIJ KHINDARIA IN GENEVA

THE OUTDATED economic policies of Western governments—not recent oil prices increases—are responsible for the fresh wave of inflation and unemployment in the West, according to the General Agreement on Tariffs and Trade (GATT).

The report by the body which monitors compliance with the agreed rules of international trade dismisses as a "dangerously wrong view" the argument that the latest oil-price-increase was a "major causative factory" behind the resurgence of inflation and the expected rise in unemployment.

The report argues that the inflationary consequences of the oil price increase in the importing countries can only occur "if changes in monetary policy fail to guard adequately against them." With the right policy response the impact on the price level and on economic growth can be kept both relatively small and mostly temporary.

The airthors point to the dangers of confusing an international transfer of purchasing power, arising from a deterioration in the terms of trade, with a decline in the level of aggregate demand for a country's output.

"By itself the former need not be deflationary. A given amount of imported petroleum has now to be exchanged for more exports. Domestic spending must be curtailed to release goods and services to meet the additional export demand from the oil supplying countries. To the extent that these two effects offset each other, there is no net deflationary (or inflationary) impulse."

The partial substitution of export for domestic demand will involve some change in the pattern of production. At the same time, as the increased cost of energy is passed on in consumer prices, the pattern of domestic demand will change.

Both changes will involve some transitional unemployment — no different from, though additional to, that caused by the continuous change which characterises modern economies.

In the medium and long term the oil price increase will affect economic growth mainly by increasing capital requirements.

"To maintain a given rate of total production, less consumption and saving will be necessary, as well as a corresponding shift in the economic structure away from consumption and towards capital goods industries.

"The simplest way of expressing these changes is to say that economising on energy implies more work."

Outlining measures to control inflation, the report puts most stress on the public's expectations and its confidence in the Government's commitment to monetary stability.

"Accommodation of exogenous price increases, heavy intervention in the foreign exchange market, failure to reduce the public budget deficit and similar signals sent by public policy only strengthen exectations of future inflation and make the eventual victory over it unnecessarily costly."

Lombard, Page 22

Soviet troops in Cuba a threat to SALT, say Democrats

BY JUREK MARTIN, U.S. EDITOR

SENIOR DEMOCRATS in the U.S. Senate have suggested that the Strategic Arms Limitation Treaty with the Soviet Union would not be passed unless the Soviet combat brigade stationed in Cuba was withdrawn.

Both Senator Robert Byrd, the majority leader, and Senator Frank Church, chairman of the foreign relations committee, agreed with remarks by President Carter that the SALT agreement should stand or fall "on its own merits."

But both agreed that, at present, the controversy surrounding the Russian troop presence so close to the U.S. made Senate ratification unlikely.

Mr. Carter said that there would always be "peaceful competition" with the Soviet Union, but that to link the SALT treaty "with some action or inaction of the Soviets, or for them to link it with some action or inaction of ours, I think, would not be in the best interest of the American people."

In its statements over the past week, the Administration has sought to avoid giving the impression that the U.S. and the USSR are engaged in one of their periodic tests of wills.

Dr. Zbigniew Brzezinski, the national security adviser, said over the weekend that comparisons with the 1962 Cuban missile crisis were completely inappropriate.

But, at the same time, the President and his aides have been stressing the gravity of the situation, and clearly warning the Soviet Union that the SALT treaty would be in jeopardy unless the military presence in Cuba was resolved to American satisfaction.

This the U.S. clearly has to find some way of accomplishing in the next month or two, if only to boost SALT's chances in the Senate. The Soviet ambassador to U.S., Mr. Dobrynin, the most trusted channel of U.S.-Soviet communications, is still on holiday in Moscow, it is believed.

Senator Church, the man who leaked the news of the Soviet brigade, appeared confident on television that the U.S. Government had a number of options at its disposal to ensure a Soviet withdrawal.

Ministers consider guarantees for microelectronics investment

BY CHRISTINE MOIR

PENSION FUNDS and insurance companies which invest directly in microelectronic companies might be able to offset some of the risk against a Government guarantee, under proposals being considered by the Department of Industry.

Ministers are quietly trying to discover whether institutions would invest substantially in this new area if the Government buttressed them against the considerable gamble involved.

The proposals are at an early stage and the Department is anxious to point out that it is considering a wide range of incentives for investment in industry. However, the guarantee scheme for the microelectronics industry is seen as desirable, and one that fits in with Conservative policy for less direct Government intervention in industry.

The Government is committed to £70m direct support for the silicon chip industry, and a further £55m is earmarked for a microelectronic applications programme.

Half this latter programme has been earmarked for training and education courses. Options have still to be considered for the second half, and the guarantee scheme would be likely to come from this.

Ministers are aware that such a sum would spread only thinly over the industry if invested directly by government. But it could be used to encourage substantially greater investment by the private sector if it were turned into some kind of insurance back-up.

Managers of the big investing funds are cautiously in favour of the proposal, but want more details before they commit themselves.

Plan for index linked TV licence

By Arthur Sandles

AN INDEX-LINKED television licence fee is likely to be introduced this autumn.

Negotiations over the scheme are being held between the Government and the BBC. It would probably be introduced in November when the licence fee is due to rise, probably to £35 a year for colour.

A hint of the new scheme came last night when Mr. Ian Trethowan, BBC director-general, spoke at a conference inL ondon. He said there were problems for the corporation in the trend towards short-term financing and a growing deficit.

"I'm glad to say that the Government itself seems to recognise the problem, and we are discussing with it an important new approach to our long-term financing.

"This would enable the BBC to plan ahead confidently for several years at a time, regardless of the transient political problems of the licence fee."

Wary

According t Mr. Trethowen, such an agreement would nt be easy to reach. The Government is wary about some aspects, we are wary about others."

Although that is all that was said in public about the proposal, I understand that the BBC woul dput forward plans for its budgets for at least the next five years, and possibly ten. These would be based on today's prices and include all aspects of BBC activity, both current expenditure and capital projects.

Having fixe a 1979 licence fee, the Government would then increase it periodically according to fluctuations in an index. One of the major areas of discussion are the elements of the BBC's comparisons."

The scheme would have attractions for both the BBC and any Government. For the BBC, it would mean a certainty of revenue and the ability to make long-term plans. For the Government, it would mean freedom from the political burden of raising the licence fee.

In theory, the public would be able to work out a licence fee increase well in advance. But the Government is not entirely happy about all aspects of the scheme.

A starting fee of more than £40 would probably be required to settle the corporation's borrowings—likely to top £50m by November—and allow for capital investments.

The Government is likely to baulk at this, settling for a fee nearer £35 and giving the BBC a few years to erase its debt.

The present colour television licence fee is £25.

Weather

UK TODAY

MAINLY dry with sunny periods.

London, England, Wales, Borders, Edinburgh and Dundee, Aberdeen, Channel is., Isle of Man

Dry with sunny periods. Max. 20C (68F).

Rest of Scotland, N. Ireland, Orkney, Shetland

Rather cloudy, rain in places. Max. 17C (63F).

Outlook: England and Wales dry with sunny periods. Changeable in Scotland and Northern Ireland.

WORLDWIDE

		Y'day midday °C	°F			Y'day midday °C	°F
Ajaccio	S	25	77	London	C	19	66
Amsdm.	S	21	70	Los Ang	C	34	92
Athens	F	27	81	Luxmbg.	F	23	73
Bahrain	F	40	104	Madrid	S	28	82
Barclna.	S	23	73	Majorca	S	27	81
Beirut	S	32	89	Malaga	S	27	81
Belfast	F	14	57	Malta	S	28	82
Belgrd.	F	22	72	M'chstr.	C	17	63
Berlin	F	22	72	Melbne	C	21	70
Biarritz	C	23	73	Milan	S	14	57
Bmghm.	C	18	64	Mntreal.	C	17	63
Blackpl.	C	16	61	Moscow	R	11	52
Bordx.	R	24	75	Munich	S	24	75
Boulgn.	C	16	61	Nairobi	S	16	62
Bristol	C	17	63	Naples	S	26	79
Brussels	F	21	70	Newcstl	C	13	55
Budpst.	F	16	61	N. York	F	25	76
B. Aires	C	17	63	Nice	S	23	73
Cairo	C	32	90	Nicosia	S	27	81
Cardiff	R	16	61	Oporto	Fg	13	55
Cas'b'ca	S	25	77	Oslo	F	17	63
Cape T.	S	18	64	Paris	C	18	66
Chicago	C	14	56	Perth	R	17	63
Cologne	C	20	68	Prague	S	24	75
Cophgn.	C	18	64	Reykjvk	R	10	50
Corfu	S	17	63	Rhodes	S	24	75
Dublin	F	14	57	Rio J'o	C	25	77
Dbrvnk.	S	25	77	Rome	S	26	79
Ednbgh.	F	14	57	Salzbrg.	S	25	77
Faro	C	23	73	S.'cisco	F	22	71
Florence	S	25	77	Singapr.	R	29	84
Frankft.	S	24	75	Stckhm.	C	15	59
Funchal	F	20	68	Strasbg.	Fg	14	57
Geneva	S	24	75	Sydney	C	24	75
Gibrltr.	S	15	59	Tangier	S	30	86
Glasgow	S	15	59	Tehran	S	29	84
G'msey	C	16	61	Tel Aviv	S	29	84
Helsinki	S	8	46	Tenerife	S	19	66
Innsbrk.	S	25	77	Tokyo	C	28	82
Invrnss.	F	13	55	Toronto	C	14	57
I.o.Man	S	15	59	Tunis	F	27	81
Istanbul	F	26	79	Valncia.	S	18	64
Jersey	C	17	63	Venice	S	24	75
Jo'burg	S	17	63	Vienna	S	26	79
L. Plms.	S	24	75	Warsaw	S	11	52
Lisbon	F	25	77	Zurich	S	23	73
Locarno	S	24	75				

C—Cloudy. F—Fair. Fg—Fog. R—Rain. S—Sunny. Sl—Sleet. Sn—Snow.

THE LEX COLUMN

Countdown for the BP offer

Arguably, the Government missed its best opportunity in purely market terms to dispose of a slice of BP back in July. But the political wheels had hardly been set into motion. Since then the loss of its Nigerian interests, and signs that crude oil prices may have reached a peak, have taken just an edge off the market's enthusiasm. Yet BP has in other respects been assembling a glittering prospectus.

Thus the dividend is to be jacked up smartly—a move forecast well in advance—and there is to be a share split with the worthy, if probably ineffective, aim of making small investors more enthusiastic (though the new shares are to be repackaged in fours for the benefit of the U.S. market, where nominal cheapness is not a virtue). Most important of all, the group published second quarter net income of £352m—more than for any past quarter and a figure that will probably be hard to beat for a long time into the future.

All is now set for an October offer for sale, a timetable that could well be approved at a Cabinet meeting this Thursday. An intake of cash would be welcome in the November banking month, which opens on October 18, for very large income tax rebates are due to be paid over. But there is still some uncertainty over the number of shares which the Government will sell.

Apart from the frozen ex-Burmah shareholding of 20 per cent of BP in the hands of the Bank of England, the Government has 61 per cent. Treasury-held stake worth some £1.4bn at the current market price. At the time of the Budget the impression was that the BP sale would account for the bulk of the £1bn of asset sales projected for the financial year. But the move to realise £400m out of the British National Oil Corporation suggests that the Government may have more flexibility on this score.

Bearing in mind the scheduled £140m sales of new town properties and the possible disposal of other stakes in quoted companies like Ferranti and ICL, the Cabinet may only need to approve a really large BP sell-off if there are signs that the public sector borrowing requirement is overshooting. And it is probably too soon to be very clear on that point.

Upon the size of the issue will depend whether the Americans need to be brought into the picture as they were in the 1977 offer. That was scarcely an event which showed the expertise of U.S. investors in the best light. They scrambled for 17m American Depostary shares at around $15, and at the end of 1977 Americans held over 34m shares. Yet during 1978 they unloaded 19m shares, sometimes at lower prices—although this year the New York price has shot up, and is now around $26. Recently, though, the weakness of the dollar has made Americans more interested in overseas securities.

The prospectus is unlikely to include a detailed profit forecast, which was also missing in 1977. Yet investors are entitled to guidance on the question of the stock profits which are padding out oil company earnings to such a striking degree. BP's recent switch from talking about stock appreciation to putting forward current cost concepts may be logical in terms of public relations but has been muddling to investors.

As for the delicate question of crude oil supplies, how convenient it would be if the current negotiations over the crude oil agreement with BNOC were to achieve some kind of positive result in time for the issue.

Philips/Grundig

Philips seems to be embarking on a worldwide campaign to strengthen its financial ties with companies with which it shares research. As well as mopping up the minority in Pye and buying into a U.S. computer firm, it is now taking Grundig into its embrace. What looked at first like a straight equity participation by Philips is turning out to involve a potential cross-holding between the two companies.

An attempted merger would have run into trouble with the German cartel office which insists that Philips should hold less than a blocking minority—25 per cent in German law—in Grundig. So Philips is taking just under a third in a holding company which is being set up with the Max Grundig Foundation. This company will hold 76¼ per cent of Grundig, giving Philips nominal control over 24¼ per cent of Grundig, and a blocking stake in its principal shareholder.

Originally it seemed that Philips was to pay cash for this holding, but no money is changing hands. Instead, the foundation will receive Fl 400m nominal of a 3 per cent Philips convertible loan. The conversion rights may be exercised at Fl 40 a share until the end of 1983 and then at Fl 50 a share for six more years, with provision for repayment of unconverted paper at par at the end of 1989. The terms of the conversion — Philips shares now stand at Fl 23.80 — suggest either that Grundig is very bullish about Philips or that it is receiving a good deal of technological help from the Dutch group.

Philips and Grundig have developed a video-recording system more advanced than the two alternatives — devised by Sony and Matsushita — which may now be coming to the end of their technical lifetime. They believe there is a chance that the Japanese will take the European technology rather than going to the expense and trouble of designing yet another system. If they are right, and the consortium can stand up effectively against the Japanese challenge, then perhaps the Philips convertible is not such a bad deal after all.

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